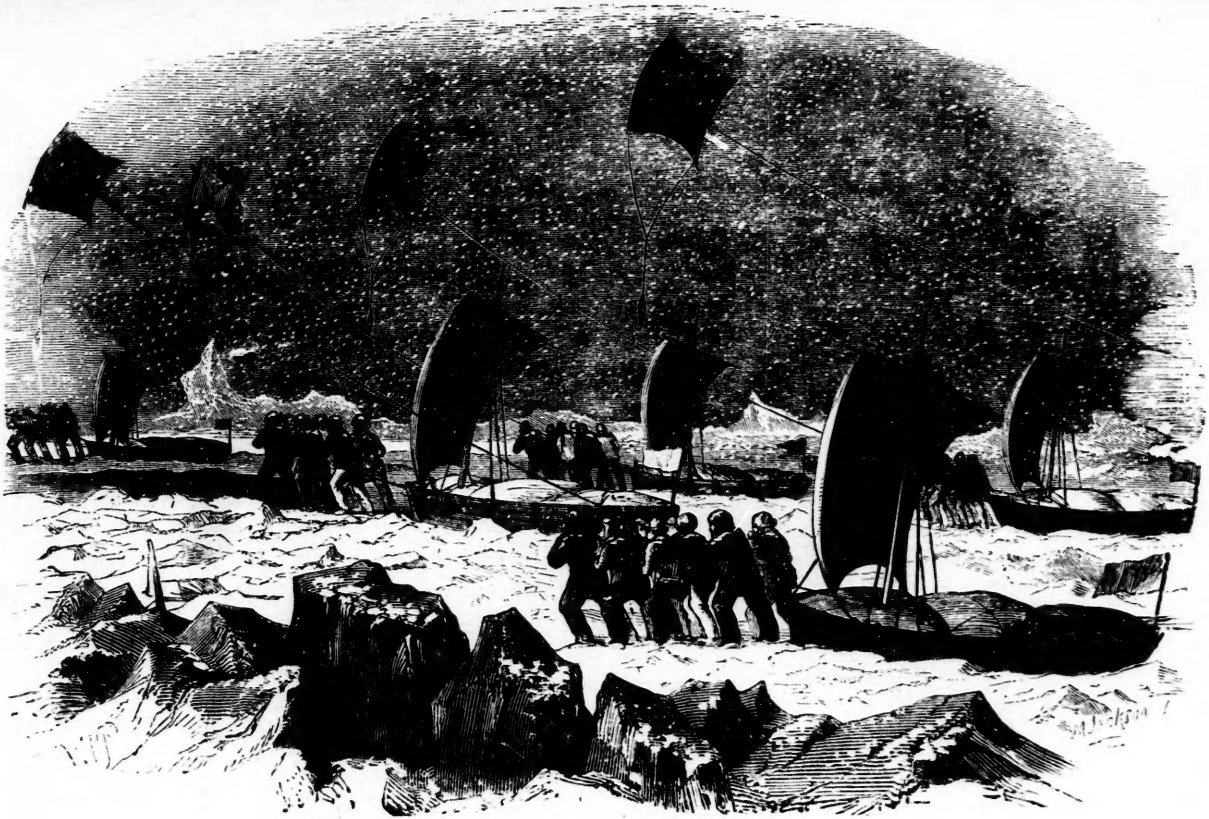

CAPTAIN AUSTIN'S SLEDGING EXPEDITION.

The various parties set forth over the ice with kites attached to the boats, sails hoisted on the masts, and the men singing at the drag-ropes.—Page 423.

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DISCOVERY AND ADVENTURE

IN THE

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...E SIR JOHN LESLIE, K.H.,

...

...V.R.S.E.

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BY R. M. BALLANTYNE.

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IN THE

POLAR SEAS AND REGIONS.

By SIR JOHN LESLIE, K.H.,

AND

HUGH MURRAY, Esq., F.R.S.E.

WITH A NARRATIVE OF THE RECENT EXPEDITIONS IN SEARCH OF SIR JOHN FRANKLIN, INCLUDING THE VOYAGE OF THE "FOX," AND THE DISCOVERY OF THE FATE OF THE FRANKLIN EXPEDITION.

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PREFACE.

THE present work was undertaken with the view of giving a complete and connected description of the varied phenomena of the Polar world, as well as an account of the more important voyages and expeditions, whether for profit or discovery, through which it has become known to Europe. Such a subject, it is believed, combining much that is interesting in natural scenery and maritime adventure, can hardly fail to prove attractive. In those climates nature is marked by the most stupendous features, and, presenting objects at once sublime and beautiful, the forms she assumes differ from her aspects in our milder latitudes almost as widely as though they belonged to another planet. The tempests and darkness of those wintry realms are strikingly varied by the brief but brilliant summer, the singular magnificence of the celestial and meteorological appearances, and the dreary grandeur of those enormous piles of ice which stud the land or float upon the water. Along with a characteristic range of vegetable productions, and a remarkable profusion of animal life wonderfully adapted to sustain existence in the extremity of cold, we are presented with a race of men singular alike from the circumstances to which they have conformed themselves, the manners and customs thence resulting, and the contrivances whereby they brave the utmost rigours of the clime. When, moreover,

it is considered that in the field of Northern Discovery, England laid the foundation of her maritime pre-eminence, and that the men who have earned in it the greatest glory were chiefly British, it will be admitted that the history of their adventures must have a peculiar charm for the English reader.

The narrative of these voyages, down to the close of the ninth chapter, was carefully drawn from the most authentic sources by Mr. Murray, whose labours in a similar department of literature have been received by the public with no common approbation. They include the adventures and exploits of many of those navigators of whom their country has the greatest reason to be proud. Such in early times were Willoughby, Chancelor, Frobisher, Davis, Hudson; more recently Parry, Scoresby, Ross, the uncle and nephew, with others of little inferior note. The wild and strange scenes through which their career led, the peculiar perils with which it was beset, the hairbreadth escapes and sometimes tragical events that ensued, give to their narratives an interest similar to that of romance.

The tenth and eleventh chapters have been prepared by an experienced writer. They trace the history of north-western exploration through most eventful recent periods, down to the winter of 1850. The former narrates the marvellous ice-voyage of Captain (now Sir George) Back, and the completion of discovery round the mysterious coasts of Boothia; the latter gives the substance of all that has been made known, up to 1850, in volumes, periodicals, and public documents, respecting the lamented expedition of Sir John Franklin, and the complicated searches for it; and the two together, it is hoped, will be regarded by every reader as an important addition to the value of this work.

The events that have recently occurred in the Northern Regions in connection with the search for Sir John Franklin's ill-fated expedition, and the discovery by M'Clintock of the document recording its fate, are so deeply interesting and important, that it has been deemed advisable to issue a new edition of the present work, with the addition of all that has reached us from the dark regions of the Polar Seas. The concluding chapters will, therefore, be found to contain a complete outline of the proceedings of the searching squadron under Sir Edward Belcher, the more recent expeditions of Dr. Rae, Dr. Kane, &c., and the voyage of the "Fox" under Captain M'Clintock, who has brought us the melancholy intelligence of the total loss of the Franklin expedition.

While, however, it has been the aim of the compiler to give the outline of events as much as possible in unbroken order, he has thought that a somewhat *fuller detail* of a few out of the many interesting events that have occurred would tend to invest the narrative with an interest which a simple outline of the whole would fail to do. Accordingly, it will be found that considerable prominence has been given to the narrative of the second voyage of the Prince Albert, under Mr. Kennedy—whose adventures are replete with striking incidents characteristic of the stormy Polar Seas—to the extraordinary voyage of Commander M'Clure, which resulted in the discovery of the far-famed North-West Passage—to the stirring and romantic voyage of the American brig "Advance," under Dr. Kane, and to the deeply interesting voyage of the "Fox."

Besides these narratives, several of the most distinguished men of science in Scotland have lent their aid to illustrate the wonderful order of nature prevailing within the Arctic Circle. Sir John Leslie commenced the volume with a full

examination of the climate and its phenomena,—subjects so important, that without a preliminary knowledge of them the progress of discovery would be but imperfectly understood.

The chapter on Natural History, though the subject be treated by Mr. Murray in a popular rather than in a scientific manner, has received the careful revision of a distinguished naturalist.

The Whale-fishery forms a striking feature in Arctic adventure, and is, besides, of great national as well as commercial importance. Of its daring operations and its various perils, the description here introduced may be the more acceptable, as it is presumed to be the only one hitherto attempted within a moderate compass.

For an account of the successive expeditions, by land or along the coast, to define the northern boundaries of the American and Asiatic continents, the reader is referred to the "NORTHERN COASTS OF AMERICA, AND THE HUDSON'S BAY TERRITORIES." In that volume are contained interesting descriptions of the wild country through which the different travellers penetrated to the shores of the Polar Sea, of the sufferings they endured, and of the valuable additions made by them to geographical science.

EDINBURGH, 1860.

CONTENTS.

CHAPTER I.

THE CLIMATE OF THE POLAR REGIONS.

Page

General View of the Subject—Light thrown on it by Voyages of Discovery—Various Opinions and Observations discussed—Distribution of Heat over the Surface of the Globe—Currents in the Atmosphere—Freezing of the Arctic Sea—Phenomena of the Seasons in the Polar Regions—Formation of Icebergs—Changes in the Aspect of the Polar Seas—Supposed Alterations in the Climate of Europe—State of the Ice in the Polar Seas—Situation of the Ancient Colonies in Greenland..... 17

CHAPTER II.

ANIMAL AND VEGETABLE LIFE IN THE POLAR REGIONS.

Remarkable Profusion of Animal Life—Means by which it is supported—The Cetacea: Whale, Narwal, Walrus, Seal—The Herring—Land Animals—The Polar Bear; its Ferocity; Anecdotes—The Rein-deer—Wolf, Fox, Dog—Birds—Vegetable Life—Peculiar Plants—Red Snow..... 62

CHAPTER III.

ANCIENT VOYAGES TO THE NORTH.

Voyage of Pytheas—Norwegian Expeditions; Ohthere—Colonization of Iceland—The Zeni—Quirini..... 95

CHAPTER IV.

VOYAGES IN SEARCH OF A NORTH-EAST PASSAGE.

Rise of Maritime Enterprise in England—Plan of a North-east Passage to India—Expedition of Sir Hugh Willoughby; its Issue—Chancelor reaches the White Sea; Journey to Moscow—Voyage of Burroughs—Of Pet and Jackman—Dutch Expeditions—Barentz's First, Second, and Third Voyages; His Death—Hudson—Wood—Litke..... 103

CHAPTER V.

EARLY VOYAGES TOWARDS THE NORTH POLE.

Page

Plan of a Polar Passage to India—Voyages to Cherie Island—Hudson—Poole—Baffin—Fotherby..... 144

CHAPTER VI.

EARLY VOYAGES IN SEARCH OF A NORTH-WEST PASSAGE.

The Portuguese; The Cortereals—The Spaniards; Gomez—Expeditions under Henry VIII.; their Issue—Frobisher's First, Second, and Third Voyages—Davis' First, Second, and Third Voyages—Weymouth—Knight—Hudson; Mutiny of his Men; Disastrous Issue of the Expedition—Voyages of Button—Gibbons—Bylot—Baffin—Jens Munk, the Dane—Fox and James—Knight and Barlow—Middleton, &c..... 155

CHAPTER VII.

VOYAGES BY ROSS AND PARRY IN SEARCH OF A NORTH-WEST PASSAGE.

Spirited Views of the British Government—Ross's Expedition; He sails round Baffin's Bay; Arctic Highlands; Lancaster Sound; His Return—Parry's First Expedition; Entrance into the Arctic Sea; Regent's Inlet—North Georgian Islands; Winters at Melville Island; Mode of spending the Winter; North Georgian Theatre; Gazette; Disappearance of the Animal Tribes; Attempt to proceed Westward during the Summer; His Return to England—Parry's Second Expedition, accompanied by Captain Lyon; He enter's Hudson's Strait; Savage Islands; Duke of York's Bay; Frozen Strait; Various Inlets Discovered; Ships Frozen in for the Winter; Polar Theatre and School; Brilliant Appearances of the Aurora Borealis; Intercourse with a Party of Esquimaux; Land Excursions; Release from the Ice; Voyage Northward; Discovery of a Strait named after the Fury and Hecla; Progress Arrested; Second Winter-quarters at Igloolik; The Esquimaux; Symptoms of Scurvy; Return of the Expedition to England—Parry's Third Expedition; He Winters at Port Bowen; Shipwreck of the Fury; Return of the Hecla..... 212

CHAPTER VIII.

ROSS'S SECOND VOYAGE.

Motives which led to the Expedition—Difficulties in Equipping it—Expense Defrayed by Sir Felix Booth—Accidents on the Coast of Scotland—Passage across the Ocean—Refitted at Holsteinborg—Passage through Barrow's Strait and down Regent's Inlet—Discovery of the Fury's Stores—Difficult Navigation—

Page

Winter Station in Felix Harbour—Means Devised for Resisting the Cold—Visit from a Party of Esquimaux—Information Respecting the Neighbouring Coasts—Expedition to Nei-tyel-le—To Shagavoke—To the Northward—For Cape Turnagain—Obliged to stop at Victory Point—Return—Attempt to Sail next Summer—Arrested for the Winter—Excursion to the Northward—And across the Country—Commander Ross's Discovery of the Magnetic Pole—Another Fruitless Attempt to bring Home the Victory—Determination to Abandon Her—Summary of Observations on the Esquimaux—Journey along the Coast to Fury Beach—Fruitless Attempt to cross Barrow's Strait—Winter at Somerset House—Successful Navigation next Summer—Reach the Isabella of Hull—Reception—Return—Joy at their Arrival—Rewards to the Adventurers—General Results of the Voyage—Return of Captain Back 271

CHAPTER IX.

MODERN VOYAGES TOWARDS THE NORTH POLE.

Expedition of Captain Phipps (Lord Mulgrave); Progress arrested by the Ice; His Return—Scoresby; Various important Observations made by him; Voyage to the Eastern Coast of Greenland; Discoveries; Returns to England—Clavering's Voyage and Discoveries—Expedition of Graah—De Blosseville—Dutaillis—Buchan's Expedition—Parry's Fourth Expedition, in which he attempts to reach the Pole; Progress along the Coast of Spitzbergen; The Boats arrive at the Ice; Mode of Travelling; Various Obstacles Encountered; Compelled to Return—Question as to the Practicability of Reaching the Pole..... 308

CHAPTER X.

EXPEDITIONS TO THE SEAS AROUND BOOTHIA.

Equipment of the Terror; Dangers in Hudson's Strait; Besetment in the Ice near Frozen Strait; Series of Dreadful Perils off Southampton Island; Disablement and Return of the Ship—Boat Voyage of Messrs. Dease and Simpson; Labyrinth Bay; Open Inlet from the Polar Sea to Back's Estuary; South Coasts of Boothia and Victoria Land; Re-entrance into the Coppermine River—Expedition of Mr. Rae; Wintering at Repulse Bay; Exploration of the Gulf of Akkolee to Lord Mayor's Bay and to the Vicinity of the Fury and Hecla Strait..... 344

CHAPTER XI.

THE FRANKLIN EXPEDITION, AND SEARCHING SQUADRONS.

Equipment and Sailing of the Erebus and the Terror—Public anxiety about their Fate—Comprehensive Plan of Operations to Search for them—Proceedings of the Herald and the Plover by way of Behring's Strait—Proceedings of an Overland Party on the Cen-

Page

tral Parts of the Arctic American Coasts—Proceedings of the Enterprise and the Investigator by way of Lancaster Sound—Supplementary Measures of Search—Increased Public Anxiety and New Searching Expeditions—Despatch of the Enterprise and the Investigator to Behring's Strait—Overland Exploration of the Coasts west of Cape Walker—New Government Expedition up Baffin's Bay to the Northern Archipelago—Private Expedition under Sir John Ross—Expeditions at the instance of Lady Franklin—Expedition from America—The North Star—Proceedings of the Prince Albert—Last View of the Exploring Ships—Traces of Sir John Franklin..... 370

CHAPTER XII.

SEARCHING EXPEDITIONS OF 1850-51-52.

Squadrons Liberated from Ice—Sledging Parties sent out—Long Journeys on Foot—Discovery of Victoria Channel—The American Expedition—Sir J. Ross's Theory respecting Franklin's Fate—Captain Austin's Opinion—Return of the Squadron—Squadron under Sir E. Belcher—Prince Albert Refitted and sent to Prince Regent's Inlet—Details of Prince Albert's Voyage and Return to England..... 422

CHAPTER XIII.

DISCOVERY OF THE NORTH-WEST PASSAGE, AND NEWS OF FRANKLIN'S PARTY.

Sir Edward Belcher's Position and Prospects—New Expedition—Injustice to the Americans—Return of Captain Inglefield, and News of the Discovery of the North-West Passage—Narrative of M'Clure's Voyage—Meeting between M'Clure and Kellet—Sir E. Belcher's Squadron—More Traces of Franklin's Route Discovered—Melancholy Death of Lieutenant Bellot—Dr. Rae's Return with News of the Discovery of Part of the Franklin Expedition, and Articles belonging to Sir J. Franklin and Party, found in the hands of the Esquimaux..... 464

CHAPTER XIV.

VOYAGES OF CAPTAIN COLLINSON AND DR. KANE; AND OVERLAND JOURNEYS OF DR. RAE, AND MESSRS. ANDERSON AND STEWART.

Captain Collinson's Voyage in the Enterprise; His Discoveries and Return to England—The Second American Expedition under Dr. Kane; Their Adventures, Discoveries, and Sufferings during two Winters in the Ice; Abandonment of their Ship; Their Arduous Boat and Sledge Journey, and Final Deliverance and Return to America—Overland Search by way of the Great Fish River by Anderson and Stewart..... 516

CHAPTER XV.

EXPEDITION UNDER CAPTAIN M'CLINTOCK—DISCOVERY OF A RECORD OF THE LOST EXPEDITION, AND THE FATE OF SIR JOHN FRANKLIN.

Page

Voyage of Captain M'Clintock in the Fox—First Winter Spent in the Pack of Baffin's Bay—Dangers of Disruption—Deliverance and Advance—Winter in Bellot's Strait—Autumn and Spring Travelling Parties—Discovery of Remains of the Franklin Expedition—Lieutenant Hobson's Discovery of a Boat and a "Record," which intimates the Death of Sir John Franklin—Skeletons and numerous Relics of the lost Crews found—Discoveries of Captain Young—Return Home—Franklin's Party the first to discover the North-West Passage—Proposed Expedition by the Americans towards the Pole 552

CHAPTER XVI.

THE NORTHERN WHALE-FISHERY.

Objects of the Whale-Fishery—Early practised on the Coasts of Europe—First Fishing Voyages to the Arctic Sea—Disputes between the different Nations—Accommodation Effected—Dutch Fishery—English Fishery; Its slow Progress and ultimate Success—Various Attempts to form Fishing Settlements on the Arctic Shores—Mode of Conducting the Fishery—Equipment—Voyage—Attack and Capture of the Whale—Operation of Flensing, &c.—Situations in which the Fishery is carried on; Its Dangers—Various Shipwrecks and Accidents—Recent Changes in the Fishing Stations; Increased Dangers—Capital Invested in the Trade; Its Produce; Ports whence it is carried on—Disasters and Shipwrecks of 1830; Adventures on the Ice; Extrication of the Remaining Vessels; General Results—Abstract of the Whale Fishings from 1815 to 1834 inclusive—Statement from 1835 to 1842—Details for 1843 and 1844 590

POLAR SEAS AND REGIONS.

CHAPTER I.

The Climate of the Polar Regions.

General View of the Subject—Light thrown on it by Voyages of Discovery—Various Opinions and Observations discussed—Distribution of Heat over the Surface of the Globe—Currents in the Atmosphere—Freezing of the Arctic Sea—Phenomena of the Seasons in the Polar Regions—Formation of Icebergs—Changes in the Aspect of the Polar Seas—Supposed Alterations in the Climate of Europe—State of the Ice in the Polar Seas—Situation of the Ancient Colonies in Greenland.

CHAP. I.

Modifying influences.

The climate and seasons within the Arctic circle exhibit most peculiar and striking features, which modify in a singular manner the whole aspect of nature. An investigation of those phenomena seems therefore necessary for enabling the reader to comprehend the narrative, and to follow through such icy regions the paths of the daring navigator. Accordingly, in order to elucidate the subject more fully, it will be proper to give some explication of the principles that regulate generally the distribution of heat over the surface of our globe.

Origin of Polar voyages.

Many of the facts relative to the Polar climate have been collected in the course of the bold and arduous attempts made to penetrate to India across the northern seas. Projects of this kind, after being long suspended,

CHAP. I.

Renewal of old projects.

were in 1818 renewed, and embraced with excessive ardour by the English government. For two or three years previous to that date, the captains of ships employed in the northern whale-fishery had generally concurred in representing the Arctic Sea as of a sudden become almost open and accessible to the adventurous navigator. By the more speculative relaters, it was supposed that the vast icy barrier, which for many ages had obstructed those dreary regions, was at last, by some revolution of our globe, broken up and dispersed.

North-west passage.

The project of finding a north-west passage to Asia,—a project so often attempted and so long abandoned,—was by consequence again revived; and the more daring scheme of penetrating to the Pole itself had likewise been seriously proposed. Of the complete success of either plan the hopes of sober thinkers were indeed extremely slender; yet the prospect held forth seemed to be more inviting, on the whole, than at any former period when such bold undertakings were attempted.

Valuelessness of the object.

The discovery of a north-west passage, were it ever attainable, could hardly, it is true, be of any real benefit to our commerce; since in such high latitudes, where alone it could be found, it would at all times be very precarious, and liable to interruption from the prevalence of ice. The scheme of actually reaching that northern point on the surface of our globe which terminates its axis of rotation, however interesting in a philosophical view, can only be regarded as an object of pure curiosity, and not likely to lead to any useful or practical results. Yet was it befitting the character of a great maritime nation to embrace every chance of improving geographical knowledge, as well as of extending the basis of natural science; and accordingly, about sixty years ago, the Board of Admiralty resolved to fit out an expedition for the express purpose of exploring the Arctic Ocean.

Books and memoirs.

The books and memoirs which contained the latest accounts of the state of the northern seas, either suggested the enterprise then pursued, or were brought

forward in consequence of its adoption. The Honourable Daines Barrington, a man of learning and some ingenuity, embraced with ardour the opinion of those who believed that it was possible to reach the Pole. In successive papers, communicated to the Royal Society of London, he not only condensed the information furnished by the older voyagers, but exhibited the results of the numerous queries relating to the same object, which he had circulated among persons engaged in the Greenland fishery. He thence proved, that, in certain favourable seasons, the Arctic Seas are for several weeks so open that intrepid navigators might safely penetrate to a very high latitude. In compliance with his sanguine representations, the Admiralty in 1773 despatched Captain Phipps to explore those regions; but this commander was unsuccessful in the attempt, having reached only the latitude of 80½ degrees, when his ship got surrounded by a body of ice near Spitzbergen, and escaped with extreme difficulty, though many of the whalers had in that summer advanced farther. Mr Barrington did not, however, despair; and, following out his views, he induced Mr Nairne and Dr Higgins to make experiments on the congelation of sea-water. The various facts were collected in a small volume, to which Colonel Beaufoy subjoined an appendix containing the answers made to his queries by Russian hunters (who are accustomed to spend the whole year in Spitzbergen), relative to the probability of travelling from that island to the Pole during winter, in sledges drawn by rein-deer. The reports of these hardy men were sufficiently discouraging. They pictured the winter at Spitzbergen as not only severe but extremely boisterous, the snow falling to the depth of three or five feet, and drifting so much along the shores by the violence of the winds as often to block up all communication. The danger of being surprised and overwhelmed by clouds of snow, raised in sudden gusts, was so great that they never ventured to undertake any long journeys over the ice. Nor did they think it at all practicable

Daines Barrington.

Season for voyaging.

Philosophic experiments.

Russian hunters.

CHAP. I.

to have loaded sledges dragged over a surface so rough and hilly by the force of rein-deer or dogs.

Mr. Scoresby.

At a recent period, the speculations of Mr Scoresby presented more than ordinary claims to attention, as exhibiting the conclusions of a diligent, accurate, and scientific observer. Trained from infancy to the navigation of the frozen seas under the direction of his father, a most enterprising and successful leader, he conjoined experience with ingenuity and judgment. For several years, during the intervals of his Greenland voyages, he prosecuted a regular course of study at the University of Edinburgh, which, enriching his mind with liberal attainments, gave a new impulse to his native genius and ardour. It was exceedingly to be regretted, that any jealousies or official punctilios should have prevented government from intrusting the principal command of the Polar expedition to him who not only proposed it originally, but whose talents and science, joined to his activity, perseverance, and enthusiasm, afforded assuredly the best promise of its ultimate success.

Education.

Hans Egede.

Hans Egede, a benevolent enthusiast, formed a plan of reclaiming the natives of Greenland from the errors of Paganism. After various ineffectual attempts, he at last procured by subscription, in Denmark, the sum of £2000, with which he purchased a vessel, and carried his family and forty settlers to Baal's River, in the 64th degree of north latitude, where he landed on the 3d of July 1721. He was afterwards appointed missionary, with a small salary, by the Danish government, which occasionally granted some aid to the colony. During his stay, which lasted till 1736, he laboured with great zeal in his vocation. In 1757, the year before his death, he printed his *Description of Greenland*, in the Danish language, at Copenhagen. A translation of that work, much improved and enlarged, with useful additions by the editor, contains valuable information, tinged with a large portion of credulity.

Baal's river.

It is remarkable that two centuries of extreme ac-

tivity should have added so little to our knowledge of the Arctic regions. The relations of the earlier navigators who sailed to those parts possess an interest which has not been yet eclipsed. The voyage of Martens from Hamburg to Spitzbergen may be cited as still the most instructive. But the best and completest work on the subject of the northern fisheries, is a treatise in three volumes octavo, translated from the Dutch language into French by Bernard de Reste, and published at Paris in 1801, under the title *Histoire des Pêches, des Découvertes et des Etablissemens des Hollandais dans les Mers du Nord.*

Little knowledge acquired.

The Arctic expedition, which in 1818 attracted the attention of the public, proposed two distinct objects, —to advance towards the Pole, and to explore a north-west passage to China. These were no doubt splendid schemes; but, in order to form a right estimate of the plan and some anticipation of its probable results, it was necessary to proceed with caution, and to employ the lights of science. The facts alleged, respecting the vast islands or continents of ice recently separated and dispersed from the Arctic regions, gave occasion to much loose reasoning, to wild and random conjectures, and visionary declamation. Glowing anticipations were confidently formed of the future amelioration of climate, which would scarcely be hazarded even in the dreams of romance. Every person possessing a slight tincture of physical science conceives himself qualified to speculate concerning the phenomena of weather, in which he feels a deep interest; and hence a very flimsy and spurious kind of philosophy, however trifling or despicable it may appear in the eyes of the few who are accustomed to think more profoundly, gained currency among certain classes of men, and engendered no small share of conceit. Meteorology is a complex science, depending on so many subordinate principles that require the union of accurate theory with a range of nice and various observations as to have advanced very slowly towards perfection.

Objects of the later expeditions.

Conjectures.

Meteorology.

CHAP. I.

Exaggerated reports.

With regard to the nature and real extent of the change which had taken place in the condition of the icy seas, the reports were no doubt greatly exaggerated. To reduce them to their just amount, it would be necessary to estimate the annual effects produced in those regions, and likewise to compare the observations of a similar kind made by experienced navigators at former periods. From a critical examination of the various facts left on record, it will perhaps appear that the Arctic Seas have been more than once, in the course of the last half-century, as open as they are now represented.*

Periodical formation of ice.

To discuss with accuracy the question of the periodical formation and destruction of the Polar ice, it becomes necessary to explain the true principles which regulate the distribution of heat over the globe. This I shall attempt to perform, independently of every hypothesis, by a direct appeal to experiment and observation.

Temperature of the earth.

If at any place we dig into the ground, we shall find, by the insertion of a thermometer, that as we successively descend we approach constantly to some limiting temperature, which under a certain depth continues unchanged. The point of this equilibrium varies in different soils, but seldom exceeds thirty or fifty feet.* If the excavation be made about the commencement of winter, the temperature will appear to increase in the lower strata; but on the contrary, if the pit be formed in the beginning of summer, it will be found to grow colder in proportion as we descend.* Hence it is manifest that the mass of the earth transmits very slowly the impressions of heat or of cold received at its surface. The external temperature of any given day will perhaps take nearly a month

* In the dreary climate of Hudson's Bay, it is remarked by the residents, that, even during the summer months, in digging through the ground for a grave, they always come at the depth of a few feet to a stratum of frozen earth.—A singular feature of the remoter Arctic tracts is the frequent appearance of *red snow*. This deception is occasioned by the interspersed multitudes of minute plants, now termed *Protococcus Nivalis*, a species of *Algæ*, which penetrate to a great depth through the snow, and vegetate in the severest weather.

to penetrate one foot into the ground. By digging downwards in summer we soon reach, therefore, the impressions of the preceding spring and winter; but the same progress into the ground brings us back to the temperatures of the autumn and of the summer. Still lower, all the various fluctuations of heat become intermingled and confounded in one common mean. Former impressions.

Such observations are more easily and correctly made, by having thermometers, with long stems, sunk to different depths in the ground; and, from an extensive register, we may conclude that the temperature of the ground is always the mean result of the impressions made at the surface during a series of years. The successive strata, therefore, at great depths, may be regarded as permanent records of the average state of the weather in distant ages. Perhaps the superficial influence will scarcely descend fifty feet in the lapse of a century. Copious springs, which percolate the bowels of the earth and rapidly convey the impressions of subterranean heat to the surface, will consequently furnish the most accurate reports of the natural register of climate. These, if rightly chosen, differ not sensibly in their temperature at all seasons; and, whether they have their seat at a depth of one hundred or of five hundred feet, they affect the thermometer alike.* We are hence entitled to conclude, that however the weather may have varied from year to year, or changed its character at intervals of short

Mode of observation.

Descent of superficial influence.

* The celebrated fountain of Vaucluse, situated in the latitude of 43° 55′, and 360 feet above the level of the Mediterranean Sea, has been observed to acquire its highest temperature about the first day of September, and to reach the lowest at the beginning of April; the former being 86°.3, and the latter 54°.1, by Fahrenheit's scale; which gives 55°.2 for its mean heat. The waters are collected from the fissures of an extensive limestone rock, and seem to receive the superficial impressions in the space of three months. They burst forth with such a volume as to form, only a few yards below their source, the translucid Sorgue, a river scarcely inferior, in the quantity of its discharge, to the Tay above the town of Perth.

CHAP. I.

periods of years, it has yet undergone no material alteration during the lapse of many ages.

Mode of explaining the facts.

Some philosophers attempt to explain such facts as are now stated, from the supposed internal heat of the globe, caused by the action of central fires; and pretend, in support of their favourite hypothesis, that the temperature always increases near the bottom of very deep mines. But this observation holds only in particular situations, where the warm exhalations from the burning of lamps and the breathing of the workmen are collected and confined under the roofs of the galleries. In the case of an open pit the effect is quite reversed, the bottom being always colder than the mean temperature. This is owing to the tendency of the chill air to descend by its superior density. The superficial impressions of heat and cold are thus not sent equally downwards; so that the warmth of summer is dissipated at the mouth of the pit, while the rigours of winter are collected below. A similar modification of temperature occurs in deep lakes, in consequence of the disposition of the colder and denser portions of the water always to sink down.

In pits.

Source of permanent heat.

The permanent heat of the ground is, therefore, produced by the mere accumulation of external impressions received, either directly from the sun's rays, or circuitously through the medium of atmospheric influence. But air is better fitted for diffusing than for storing up heat. The whole mass of the atmosphere, it may be easily shown, does not contain more heat than a stratum of water only ten feet thick, or one of earth measuring fifteen feet. According to their relative temperature, the winds, in sweeping along the ground, either abstract or communicate warmth. But the sun is the great and original fountain of heat, which the internal motion excited in the atmosphere only serves to distribute more equally over the earth's surface. The heat imparted to the air, or to the ground, is always proportional to the absorption of the solar beams; and hence the results are still the same, whether we embrace the simple theory,

Effect of winds.

that heat is only the subtile fluid of light in a state of combination with its substratum, or prefer the opinion that light has always conjoined with it a certain admixture of the invisible matter of heat.

Form of the earth.

Owing to the spherical form of the earth, and the obliquity of its axis, very different quantities of light or heat are received in the several latitudes. The same portion of heat, which would raise the temperature of 135 pounds of water a degree on Fahrenheit's scale, is only capable of melting one pound of ice. The measure of ice dissolved is therefore the simplest and most correct standard for estimating the quantity of heat expended in that process. If we apply calculation to actual experiment, we shall find that the entire and unimpaired light of the sun would, at the Equator, at the mean latitude of 55°, and at the Pole, respectively, be sufficient to melt a thickness of ice expressed by 38.7, 25.9, and 13.4 feet. Of this enormous action, the greatest portion is no doubt wasted in the vast abyss of the ocean; and, of the remainder, a still larger share is perhaps detained and dissipated in the upper atmosphere, or projected again in a soft phosphorescence. Yet the light which, after those diminutions, finally reaches the surface of the earth, if left to accumulate there, would create such inequality of temperature as must prove quite insupportable.

Solar heat at the Equator and Pole.

Conducting quality of ground.

The slow-conducting quality of the ground, if not altered by extraneous influence, would fix the heat where it was received, and thus perpetuate the effect of the unequal action of the sun's beams. The mobility of the atmosphere hence performs an important office in the economy of nature, as the great regulator of the system, dispensing moderate warmth, and attempering the extremities of climate over the face of the globe. As the heat accumulates within the tropics, it occasions currents of cold air to rush from the higher latitudes. But the activity of the winds thus raised, being proportional to their exciting cause, must prevent it from ever surpassing certain limits. A perpetual commerce of heat

CHAP. I.

Interchange of heat and cold.

between the Poles and the Equator is hence maintained by the agency of opposite currents in the atmosphere. These currents often have their direction modified; and they may still produce the same effects, by pursuing an oblique or devious course. The actual phenomena of climate only require the various winds, throughout the year, to advance southwards or northwards at the mean rate of about two miles an hour, or to perform in effect three journeys of transfer annually from the Equator to either Pole. Not that these currents carry the impressions of heat or cold directly from one extremity of the globe to the other, but by their incessant play they contribute, in the succession of ages, to spread them gradually over the intervening space.

Aerial currents.

The system of opposite aërial currents leads to the same law of the gradation of temperature in different latitudes, as the celebrated Professor Mayer of Göttingen deduced from an empirical process.* It would appear that the variation of the mean temperature at the level of the sea is always proportional to the sine of twice the latitude. Thus, for the parallels of every five degrees, the arrangement is simple: —

Latitude.	Mean Temperature.	Latitude.	Mean Temperature.
0°	84°	50°	53°.5
5°	83°.8	55°	49°.2
10°	82°.4	60°	45°.0
15°	80°.7	65°	41°.3
20°	77°.9	70°	38°.1
25°	74°.9	75°	35°.5
30°	70°.9	80°	33°.6
35°	67°.0	85°	32°.4
40°	62°.4	90°	32°
45°	58°.0		†

* This proposition admits of a mathematical demonstration, but which is too intricate for the present discourse.

† Perhaps the gradation of temperature would, in the higher latitudes, require a small modification. Instead of assuming 32° as the medium at the Pole, it might be more exact to adopt 28°, or the melting-point of the ice of sea-water. But the re-

The arithmetical mean, or 50°, corresponds to the middle latitude of 45°; but the real mean of the temperature over the whole surface of the globe is 67°, which should occur on the parallel of 35° 51½′

System of currents.

It thus appears that the system of currents maintained in the atmosphere contributes essentially, by its unceasing agency in transferring and dispersing heat, to prevent the excessive inequality of seasons in the higher latitudes. But the motions produced in such a vast mass of fluid must evidently follow, at long intervals, the accumulated causes which excite them. Hence probably the origin of those violent winds which, succeeding to the sultry warmth of summer and the sharp frosts of winter, prevail in the months of September and March, and are therefore called by seamen the *Equinoctial Gales*. In the Arctic Seas nature has made a further provision for correcting the excessive irregularity of the action of the sun's rays. This luminary, for several months in winter, is totally withdrawn from that dreary waste; but, to compensate for his long absence, he continues during an equal period in summer to shine without interruption. Now, from a beautiful arrangement, the surface of the ocean itself, by its alternate freezing and thawing, presents a vast substratum,

Equinoctial gales.

cent voyagers have registered the coldness in advancing northwards as much more intense. It is evident, however, that their thermometrical observations must have been affected by some latent and material inaccuracy. Were the mean temperature of the Arctic regions really below the point of saline congelation, the annual formation of ice in those seas would exceed the quantity dissolved, and therefore the extension of the frozen fields would, contrary to fact, be constantly progressive. This argument appears to be quite conclusive; though some attempts are made to elude its force, by alleging that thick blocks of ice, transmitting the impressions of cold with extreme slowness, may confine and exasperate the atmospheric rigours. But ice conducts like water near the freezing-point, when this fluid conveys the external influence of heat and cold as a solid mass, unassisted by the translocation of its particles, which can occur only in the case of sensible expansions. The formation and dissolution of ice are therefore similar acts, that contribute equally to mitigate the vicissitudes of the Arctic climate.

CHAP. I.

Temperature of the ocean.

on which the excesses of heat and of cold in succession are mutually spent. In ordinary cases, the superficial water, as it cools and therefore contracts, sinks down into the abyss by its superior gravity; but when it grows warmer it expands, and consequently floats incumbent, communicating afterwards its surplus heat with extreme slowness to the mass below. But the seas within the Arctic circle being always near the verge of congelation, at which limit water scarcely undergoes any sensible alteration of volume even from a considerable change of temperature, the superficial stratum remains constantly stagnant, and exposed to receive all the variable impressions of the sweeping winds. The piercing cold of winter, therefore, spends its rage in freezing the salt water to a depth proportional to its intensity and continuance.* The prolonged warmth of summer, again, is consumed in melting those fields of ice, every inch of which in thickness requiring as much absorption of heat as would raise the temperature of a body of water 10½ feet thick a whole degree. The summer months are hence nearly gone before the sun can dissolve the icy domes, and shoot with entire effect his slanting rays. It may be shown, that under the Pole the action of the solar light is, at the time of the solstice, one-fourth part greater than at the Equator, and sufficient in the course of a day to melt a sheet of ice an inch and a half thick.

Heat of summer.

Equilibrium maintained.

If horizontal winds serve to balance the unequal action of the solar beams over the surface of the globe, the rising and descending currents excited in the body of the atmosphere still more effectually maintain the equilibrium of day and night. After the ground has

* At Melville Island, in the latitude of 74° 45′, Captain Parry observed ice to form, of a thickness from three to five inches, around the ship's sides in the space of twenty-four hours; and in one instance it gained in that time the thickness of 7½ inches, Fahrenheit's thermometer being then 12° below zero. Such power of congelation, it might be computed, would require the full refrigerating action of a stratum of air, at that temperature, rather more than a mile in height.

become heated by the direct illumination of the sun, it warms the lowest portion of the incumbent air, which, being thus dilated, begins to ascend, and therefore occasions the descent of an equal portion of the fluid. But these vertical currents, being once created, will continue their motion long after the primary cause has ceased to impel them, and may protract, during the night, the accumulation of chilled air on the surface of the earth. This effect is further augmented, in general, by the frigorific impressions which are at all times darted downwards from a clear sky.* By the operation of this combined system, therefore, the diurnal vicissitudes of heat and cold are diminished in the temperate and torrid zones. Another consequence results from such rapid and continual interchange of the higher and lower strata, that the same absolute quantity of heat must obtain at every altitude in the atmosphere.

Reaction on the air.

Augmentation of the effect.

But this equal distribution of heat at all elevations is modified by another principle, which causes the regular gradation upwards of a decreasing temperature. In fact, air is found to have its capacity or attraction for heat enlarged by rarefaction; so that any portion of the fluid carried to the higher regions, where it by consequence expands, will have its temperature proportionally diminished. The decrease of temperature in ascending the atmosphere, to moderate heights, is not far from being uniform, at the rate of about one degree on Fahrenheit's scale for every hundred yards of elevation.†

Modifying causes.

* See Supplement to the Encyclopædia Britannica, vol. iii. part i. p. 177; or Transactions of the Royal Society of Edinburgh, vol. viii. part ii. p. 465.

† It should be remarked, however, that at great elevations the law of equal decrements of heat suffers a considerable deviation. In the higher regions of the atmosphere the decrease of temperature advances proportionally faster. Such is the conclusion drawn from some nice experiments, and confirmed by a comparison of numerous actual observations. It may be sufficient to notice here a few distinct results. Thus, while at the level of the sea the mean temperature of the air or the land is, in the tropical regions, one degree colder for each hundred yards of ascent, it suffers the same decrease at the elevation of one mile for every 92 yards, at two miles for 85

CHAP. I.

Limit of perpetual congelation.

Hence the limit of perpetual congelation forms a curve, which is nearly the same as the *Companion of the Cycloid*, bending gradually from the Equator, reverting its inflexure at the latitude of 45°, and grazing the surface at the Pole. The mean heights of eternal frost, under the Equator, and at the latitudes of 30° and 60°, are respectively 15207, 11484, and 3818 feet.

Heat of water.

It is important to remark, that the heat of large collections of water seldom agrees precisely with the mean temperature corresponding to the latitude. The variable impressions received at the surface from the atmosphere will not, as on land, penetrate slowly into the mass, and become mingled and equalized at a moderate depth. Heat is conducted through liquids chiefly by the internal play resulting from their partial expansion. In the more temperate regions of the globe, the superficial waters of lakes or seas, as they grow warmer, and, therefore, specifically lighter, still remain suspended by their acquired buoyancy. But whenever they come to be chilled they suffer contraction, and are precipitated by their greater density. Hence the deep water, both of lakes and of seas, is always considerably colder than what floats at the surface. The gradation of cold is distinctly traced to the depth of twenty fathoms, below which the diminished temperature continues nearly uniform as far as the sounding-line can reach. In shallow seas, however, the cold substratum of liquid is brought nearer to the top. The increasing coldness of water, drawn up from the depth of only a few fathoms, may hence indicate to the navigator who traverses the wide ocean his approach to banks or land.

Precipitation of cold in lakes.

Peculiar circumstances of the Arctic Seas.

These principles, however, do not apply to the peculiar circumstances of the Arctic Seas. Water differs essentially, in its expansion by heat, from mercury, oil,

yards, at three miles for 78 yards, at four miles for 72 yards, and at five miles, the highest summit perhaps of our globe, the decrement of a degree for 66 yards. Within the Arctic circle the gradation of cold, in ascending the atmosphere, must be decidedly more rapid.

Expansion by heat.

or alcohol: Far from dilating uniformly,—a property which fits the latter substances for the construction of thermometers,—it swells from the point of congelation, or rather a very few degrees above it, with a rapid progression to that of boiling. Near the limit of its greatest contraction, the volume of water is scarcely affected at all by any alteration of heat. When the surface of the ocean is depressed to a temperature between 28 and 44 degrees of Fahrenheit's scale, it remains almost stagnant, and therefore exposed to the full impression of external cold. Hence the Polar Seas are always ready, under the action of any frosty wind, to suffer congelation. The annual variations of the weather are in those seas expended on the superficial waters, without disturbing the vast abyss below. Contrary to what takes place under milder skies, the water drawn up from a considerable depth is often warmer within the Arctic circle than what lies on the surface. The floating ice accordingly begins to melt generally on the under side, from the slow communication of the heat sent upwards.

Aptitude for congelation.

Astronomical evidence.

These deductions are confirmed by the results of the nicest astronomical observations. Any change in the temperature of our globe would occasion a corresponding change of volume, and consequently an alteration in the momentum of the revolving mass. Thus, if from the accession of heat the earth had gained only a millionth part of linear expansion, it would have required an increase of five times proportionally more momentum to maintain the same rotation. On this supposition, therefore, the diurnal revolution would have been retarded at the rate of three seconds in a week. But the length of the day has certainly not varied one second in a year since the age of Hipparchus; for we cannot imagine that the ancient observations of eclipses could ever deviate an hour, or even 3000″, from the truth. We may hence conclude, that in the lapse of three thousand years the mass of our globe has not acquired the ten-millionth part of expansion,—an effect which

Length of day.

CHAP. I.

the smallest fraction of a degree of heat would have communicated.

Influence of the accumulation of ice.

The accumulation of ice on the surface of the ocean would likewise have occasioned a prolongation of the length of the day. This alteration would no doubt be diminished under the Arctic circle, from the proximity of the glacial protuberance to the axis; but its influence would still cause an appreciable difference.

Interval of warmth.

After the continued action of the sun has at last melted away the great body of ice, a short and dubious interval of warmth occurs. In the space of a few weeks, visited only by slanting and enfeebled rays, frost again resumes its tremendous sway. Snow begins to fall as early as August, and the whole ground is covered to the depth of two or three feet, before the month of October. Along the shores and bays the fresh water, poured from rivulets or drained from the thawing of former collections of snow, becomes quickly converted into solid ice. As the cold augments the air deposits its moisture in the form of a fog, which freezes into a fine gossamer netting or spicular icicles, dispersed through the atmosphere and extremely minute, that might seem to pierce and excoriate the skin. The hoar-frost settles profusely, in fantastic clusters, on every prominence. The whole surface of the sea steams like a limekiln,—an appearance called the *frost-smoke*, caused, as in other instances of the production of vapour, by the water's being still relatively warmer than the incumbent air. At length the dispersion of the mist, and consequent clearness of the atmosphere, announce that the upper stratum of the sea itself has cooled to the same standard; a sheet of ice spreads quickly over the smooth expanse, and often gains the thickness of an inch in a single night. The darkness of a prolonged winter now broods impenetrably over the frozen continent, unless the moon chance at times to obtrude her faint rays, which only discover the horrors and wide desolation of the scene. The wretched settlers, covered with a load

Fogs.

Frost-smoke.

of bear-skins, remain crowded and immured in their hut, every chink of which they carefully stop against the piercing cold; and, cowering about the stove or the lamp, they seek to doze away the tedious night. Their slender stock of provisions, though kept in the same apartment, is often frozen so hard as to require to be cut by a hatchet. The whole of the inside of their hut becomes lined with a thick crust of ice; and if they happen for an instant to open a window, the moisture of the confined air is immediately precipitated in the form of a shower of snow. As the frost continues to penetrate deeper, the rocks are heard at a distance to split with loud explosions. The sleep of death seems to wrap up the scene in utter and oblivious ruin.*

Reappearance of the sun.

At length the sun reappears above the horizon;† but his languid beams rather betray the wide waste than brighten the prospect. By degrees, however, the farther progress of the frost is checked. In the month of May the famished inmates venture to leave their hut, in quest of fish on the margin of the sea. As the sun acquires elevation his power is greatly increased. The snow gradually wastes away,—the ice dissolves apace,—and vast fragments of it, detached from the cliffs, and undermined beneath, precipitate themselves on the shores with the crash of thunder. The ocean is now unbound,

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* "The sound of voices which, during the cold weather, could be heard at a much greater distance than usual, served now and then to break the silence which reigned around us; a silence far different from that peaceable composure which characterizes the landscape of a cultivated country; it was the death-like stillness of the most dreary desolation, and the total absence of animated existence."—PARRY. During the winter at Melville Island, people were heard conversing at the distance of a mile. This was no doubt owing partly to the density of the frigid atmosphere, but chiefly to the absence of all obstruction in a scene of universal calm and darkness.

† In the Arctic regions, the atmosphere being highly condensed by the intensity of the cold, the horizontal refraction is much augmented, which causes the sun to reappear several days sooner than might be expected from the latitude. This curious and cheering effect was first remarked by the unfortunate Hollanders who wintered at Spitzbergen in 1596.

CHAP. I.

Breaking up of the ice.

and its icy dome broken up with tremendous rupture. The enormous fields of ice, thus set afloat, are, by the violence of wind and currents, again dissevered and dispersed. Sometimes, impelled in opposite directions, they approach and strike with a mutual shock, like the crash of worlds,—sufficient, if opposed, to reduce to atoms, in a moment, the proudest monuments of human power. It is impossible to picture a situation more awful than that of the crew of a whaler, who see their frail bark thus fatally enclosed, expecting immediate and inevitable destruction.

Dissipation of the shoals of ice.

Before the end of June, the shoals of ice in the Arctic Seas are commonly divided, scattered, and dissipated. But the atmosphere is then almost continually damp, and loaded with vapour. At this season of the year, a dense fog generally covers the surface of the sea, of a milder temperature indeed than the frost-smoke, yet produced by the inversion of the same cause. The lower stratum of air, as it successively touches the colder body of water, becomes chilled, and thence disposed to deposit its moisture. Such thick fogs, with mere gleams of clear weather, infesting the northern seas during the greater part of the summer, render their navigation extremely dangerous. In the course of the month of July, the superficial water is at last brought to an equilibrium of temperature with the air, and the sun now shines out with a bright and dazzling radiance. For a certain time before the close of the summer, such excessive heat is accumulated in the bays and sheltered spots, that the tar and pitch are sometimes melted, and run down the ships' sides.

Dangerous navigation

Excessive heat.

Notwithstanding the shortness of the summer in the high latitudes, the air on land becomes often oppressively sultry. This excessive heat, being conjoined with moisture, engenders clouds of mosquitoes, from the stings of which the Laplanders are forced to seek refuge in their huts, where they envelop themselves in dense smoke. Humidity marks the general character of the Arctic regions, which are covered during the greater

part of the year with chilling fogs. The sky seldom appears clear except for a few weeks in winter, when the cold at the surface becomes most intense. Yet the rigour of that season is not felt so severely as the thermometer would indicate. When the temperature is lowest the air is commonly calm, and therefore abstracts less heat from the body than the exposure to a strong wind of much inferior coldness. The providence of the natives serves to mitigate the hardships they have to suffer. The Esquimaux, on the approach of winter, cut the hard ice into tall square blocks, with which they construct regular spacious domes, connected with other smaller ones, for the various purposes of domestic economy. They shape the inside with care, and give it an even glossy surface by the affusion of water. The snowy wall soon becomes a solid concrete mass, which, being a slow conductor, checks the access of cold, while it admits a sufficient portion of light. It may also be remarked, that the external darkness prevails only during a part of the day. Since twilight obtains whenever the sun is less depressed than 18 degrees below the horizon, the limits of entire obscuration occur in the latitudes of 84½° and 48½°; in the former at mid-day in the winter solstice, and in the latter at midnight in the solstice of summer. Between these extremes the atmosphere at the opposite seasons glows, to a greater or a less extent, from the middle of the day or of the night. Accordingly, Captain Parry's party, during their detention at Melville Island, in the latitude of 74 40′, found that, in clear weather about noon, they could easily, in the depth of winter, read the smallest print on deck. This position corresponds to the alternating parallel of 58° 20′, which nearly reaches Orkney, where the transparency of the nights in the height of summer is well known.* The approach of twilight is, besides,

Absence of wind.

Ice building.

Twilight.

* This view of the subject deserves perhaps more elucidation. The inhabitant of a temperate climate may hence form a better conception of the progressive glimmer of an Arctic winter. In a high northern latitude the dusky glow at noon in mid-winter

CHAP. I.

Refraction.

advanced in the frozen regions by the superior refractive power of a very dense atmosphere. The horizontal refraction usually raises the lower limb of the sun and moon about the twelfth part of their diameters, and often gives it a wavy and fantastic outline. Hence the reappearance of those luminaries is hastened within the Arctic circle, though the quantity of anticipation has been much exaggerated.

The ice which obstructs the navigation of the Arctic Seas consists of two very different kinds; the one produced by the congelation of fresh, and the other by

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Mid-winter moon.

exactly resembles the summer twilight in some corresponding latitude farther south. Let L and l denote the two northern latitudes, D and d the north or south declination of the sun; then will the depression of this luminary below the horizon be expressed in winter by $d+L-90^\circ$, and in summer by $90^\circ-D-l$. Assuming $23\frac{1}{2}^\circ$ for D and d, the depressions at the solstitial points will be respectively $L-66\frac{1}{2}^\circ$ and $66\frac{1}{2}^\circ-l$; and consequently reckoning the limit of darkness when the sun is 18° below the horizon, $L-66\frac{1}{2}^\circ=18^\circ$, and $66\frac{1}{2}^\circ-l=18^\circ$, and $L=84\frac{1}{2}^\circ$, and $l=48\frac{1}{2}^\circ$, being the latitudes where the gleam at midday in winter and the twilight at midnight in summer first appear. But in general, the latitudes of equal obscurity or illumination are evidently included in the simple formula $L+l=133^\circ$. Hence this equivalent table:—

$84\frac{1}{2}^\circ$	$48\frac{1}{2}^\circ$
85°	48°
86°	47°
87°	46°
88°	45°
89°	44°
90°	43°

At the Pole.

At the Pole, therefore, it is as dark at noon in the depth of winter as it is at midnight in the summer solstice at the latitude of 43°.

But a modification may possibly be required. We should probably come nearer the truth to assume, as the limit of darkness, a depression of 20° for the Arctic regions (where the horizontal refraction is so much increased by excessive cold), and only 16° for the milder climates. The table would then stand thus:—

$86\frac{1}{2}^\circ$	$50\frac{1}{2}^\circ$
87°	50°
88°	49°
89°	48°
90°	47°

CHAP. I.

Different ices.

that of salt water. In those inhospitable tracts, the snow, which annually falls on the islands or continents, being again dissolved by the progress of the summer's heat, pours forth numerous rills and limpid streams, which collect along the indented shores, and in the deep bays enclosed by precipitous rocks. There this clear and gelid water soon freezes, and every successive year supplies an additional investing crust, till, after the lapse perhaps of several centuries, the icy mass rises at last to the size and aspect of a mountain, commensurate with the elevation of the adjoining cliffs. The melting of the snow, which is afterwards deposited on such enormous blocks, likewise contributes to their growth; and by filling up the accidental holes or crevices, it renders the whole structure compact and uniform. Meanwhile the principle of destruction has already begun its operations. The ceaseless agitation of the sea gradually wears and undermines the base of the icy mountain, till at length, by the action of its own accumulated weight, when it has perhaps attained an altitude of a thousand or even two thousand feet, it is torn from its frozen chains, and precipitated, with a tremendous plunge, into the abyss below. This mighty launch now floats like a lofty island on the ocean; till, driven southwards by winds and currents, it insensibly wastes and dissolves away in the wide Atlantic.

Melting of snow.

Such I conceive to be the real origin of the icy mountains or *icebergs*, entirely similar in their formation to the *glaciers* which occur on the flanks of the Alps and the Pyrenees. They consist of a clear, compact, and solid ice, having the fine green tint verging to blue, which ice or water, when very pure and of a sufficient depth, generally assumes. From the cavities of these icebergs, the crews of the northern whalers are accustomed, by means of a *hose* or flexible tube of canvass, to fill their casks easily with the finest and softest water. Of the same species of ice, the fragments which are picked up as they float on the surface

Origin of icebergs.

Icebergs.

of the ocean yield the adventurous navigator the most refreshing beverage.*

Freezing of sea-water.

It was long disputed among the learned, whether the waters of the ocean are capable of being congealed; and many frivolous and absurd arguments, of course, were advanced to prove the impossibility of the fact. But the question is now completely resolved; and the freezing of sea-water is established both by observation and experiment. To congeal such water of the ordinary saltness, or containing nearly the thirtieth part of its weight of saline matter, it requires not an extreme cold: this process taking effect about the 27th degree

* The water which flows from those Arctic glaciers becomes frozen again on the approach of winter, and forms along the coast a thick stratum of blue solid ice, embedded in the beach, and from six to ten feet under the surface.

on Fahrenheit's scale, or only five degrees below the freezing-point of fresh water. The product, however, is an imperfect sort of ice, easily distinguishable from the result of a regular crystallization: it is porous, incompact, and imperfectly diaphanous. It consists of spicular shoots, or thin flakes, which detain within their interstices the stronger brine; and its granular spongy texture has, in fact, the appearance of congealed syrup, or what the confectioners call *water-ice*. This saline ice can, therefore, never yield pure water; yet, if the strong brine imprisoned in it be first suffered to drain off slowly, the loose mass that remains will melt into a brackish liquid, which in some cases may be deemed drinkable.*

Freezing-point of salt-water.

While icebergs are the slow growth of ages, the fields or shoals of saline ice are annually formed and destroyed. The ice generated from melted snow is hard, pellucid, and often swells to an enormous height and dimensions. But the concretion of salt water wants solidity, clearness, and strength, and never attains to any very considerable thickness. It seldom floats during more than part of the year; though, in some cold seasons, the scattered fragments may be surprised by the early frost, and preserved till the following summer.

Growth of icebergs.

The whale-fishers enumerate several varieties of the salt-water ice. A very wide expanse of it they call a *field*, and one of smaller dimensions a *floe*. When a field is dissevered by a subaqueous or *grown* swell, it breaks into numerous pieces, seldom exceeding forty or fifty yards in diameter, which, taken collectively, are termed a *pack*. This pack again, when of a broad shape, is called a *patch;* and, when much

Varieties of salt-water ice.

* Captain Parry remarked, that the superficial water near melting ice had scarcely any trace of saltness. In other observations made about the end of July, he discovered the water at the surface to contain only the 550th part of its weight of salt; but under ten fathoms the proportion had increased to the 39th, and at the depth of 300 fathoms to the 37th part. The friable ice of sea-water was found to hold the 115th part of salt.

CHAP. I.

A stream.

elongated, a *stream*. The packs of ice are crowded and heaped together by violent winds; but they again separate and spread asunder in calm weather. If a ship can sail freely through the floating pieces of ice,

Drift-ice.

it is called *drift-ice*, and is said to be *loose* or *open*. When, again, from the effect of abrasion, the larger blocks are crumbled down into minute fragments, this collection is called *brash-ice*. A portion rising above the common level is termed a *hummock*, being produced by the squeezing of one piece over another. These hummocks or protuberances break the uniform surface of the ice, and give it a most diversified and fantastic appearance. They are numerous in the heavy packs, and along the edges of ice-fields, reaching to the height

Sludge.

of thirty feet. The term *sludge* is applied by the sailors to the soft and incoherent crystals which the frost forms when it first attacks the ruffled surface of the ocean. As these increase, they have some effect, like oil, to still the secondary waves; but they are prevented from coalescing into a continuous sheet by the agitation which still prevails; and they form small discs, rounded by continual attrition and scarcely three inches in diameter, called *pancakes*. Sometimes these again unite into circular pieces, perhaps a foot thick, and many yards in circumference.

Ice-blink.

The fields and other collections of floating ice are often discovered at a great distance, by that singular appearance on the verge of the horizon, which the Dutch seamen have termed *ice-blink*. It is a stratum of lucid whiteness, occasioned evidently by the glare of light reflected obliquely from the surface of the ice against the opposite atmosphere. This shining streak, which looks always brightest in clear weather, indicates, to the experienced navigator, 20 or 30 miles beyond the limit of direct vision, not only the extent and figure, but even the quality of the ice. The *blink* from packs of ice appears of a pure white, while that which is occasioned by snow-fields has some tinge of yellow.

The mountains of hard and perfect ice are the gradual

production, perhaps, of many centuries. Along the western coast of Greenland, prolonged into Davis' Strait, they form an immense rampart, which presents to the mariner a sublime spectacle, resembling at a distance whole groups of churches, mantling castles, or fleets under full sail. Every year, but especially in hot seasons, they are partially detached from their bases, and whelmed into the deep sea. In Davis' Strait those icebergs appear the most frequent; and about Disco Bay, where the soundings exceed 300 fathoms, masses of such enormous dimensions are met with, that the Dutch seamen compare them to cities, and often bestow on them the familiar names of Amsterdam or Haerlem. They are carried towards the Atlantic by the current which generally flows from the north-east, and after they reach the warmer water of the lower latitudes they rapidly dissolve, and finally disappear, probably in the space of a few months.

Mountains of ice.

The blocks of fresh-water ice appear black as they float, but show a fine emerald or beryl hue when brought up on the deck. Though perfectly transparent like crystal, they sometimes enclose threads or streamlets of air-bubbles, extricated in the act of congelation. This pure ice, being only a fifteenth part lighter than fresh water, must consequently project about one-tenth as it swims on the sea. An iceberg of 2000 feet in height would therefore, after it floated, still rise 200 feet above the surface of the water. Such, perhaps, may be considered as nearly the extreme dimensions. Those mountains of ice may even acquire more elevation at a distance from land, both from the snow which falls on them, and from the copious vapours which precipitate and congeal on their surface. But in general they are carried forwards by the current which sets from the north-east into the Atlantic, where, bathed in a warmer fluid, they rapidly waste and dissolve. It may be shown by experiment, that if the water in which they float had only the temperature of 42°, the mass of ice would lose the thickness of an inch every

Colour of ice.

Floating of icebergs.

CHAP. I.

Dissolving of icebergs.

hour, or two feet in a day. Supposing the surface of the sea to be at 52°, the daily diminution of thickness would be doubled, and would therefore amount to four feet. An iceberg having 600 feet of total elevation would hence, on this probable estimate, require 150 days for its dissolution. But the melting of the ice would be greatly accelerated if the mass were impelled through the water by the action of winds. A velocity of only a mile in an hour would triple the ordinary effect. Hence, though large bodies of ice are often found near the banks of Newfoundland, they seldom advance farther, or pass beyond the 48th degree of latitude. Within the Arctic regions those stupendous blocks remain, by their mere inertia, so fixed on the water, as commonly to serve for the mooring of vessels employed in the whale-fishery. In such cases, however, it is a necessary precaution to lengthen the cables, and ride at some distance from the frozen cliff; because the fragments of ice, which the seamen term *calves*, are frequently detached from the under part of the mass, and, darting upwards, acquire such a velocity in their ascent, that they would infallibly strike holes into the ship's bottom.

Position in the Arctic regions.

Salt-water ice.

The ice produced from salt-water is whitish, porous, and almost opaque. It is so dense, from the quantity of strong brine enclosed in its substance, that when floating in the sea, it projects only one-fiftieth part above the surface. The porous saline ice has a variable thickness, yet seldom exceeding six feet, and which, though during the greater part of the year it covers the Arctic Seas, is annually formed and destroyed; a small portion only, and at certain seasons, escaping the general wreck. The thaw commonly lasts about three months; and during that time the heat of the solar rays, which, though oblique, yet act with unceasing energy, whether applied directly or through the intervention of the air or the water, is sufficient for the dissolution of all the ice produced in the course of the autumn, the winter, and the spring. It may be proved by experiment that, under

Power of the sun.

the Pole itself, the power of the sun at the solstice could, in the space of a week, melt a stratum of five inches of ice. We may hence fairly compute the annual effect to be sufficient for thawing to the depth of forty inches. It should likewise be observed, that, owing to the prevailing haziness of the atmosphere in the northern latitudes, there can scarcely exist those singular cold emanations which always dart from an azure sky, and in the more temperate climates diminish the calorific action of the sun often by one-fifth part. On this account, perhaps, the estimate of the annual destruction of Polar ice may be raised to a thickness of four feet.

Heat.

As heat is absorbed in the process of thawing, so it is again evolved in the act of congelation. The annual formation and destruction of ice within the Arctic circle is thus a beautiful provision of Nature for mitigating the excessive inequality of temperature. Had only dry land been there opposed to the sun, it would have been absolutely scorched by his incessant beams in summer, yet pinched during the darkness of winter by the most intense and penetrating cold. None of the animal or vegetable tribes could have at all supported such extremes. But in the actual arrangement the surplus heat of summer is spent in melting away the ice; and its deficiency in winter is partly supplied by the influence of the progress of congelation. As long as ice remains to thaw, or water to freeze, the temperature of the atmosphere can never vary beyond certain limits. Such is the harmony of the system; and all experience and observation confirm the belief that it is not subject to any radical change. Some years may chance to form more ice than others, or to melt more away; but it were idle to expect any thing like a general or permanent disruption of the glacial crust which binds the regions of the north. Even were this ice once removed, a similar collection would soon succeed, since it is always the effect, and not the cause, of the disposition of the atmosphere, which it really serves to temper. We should be guilty of the most vicious reasoning in a circle, if we

Effect of water.

Annual changes.

CHAP. I.

maintained that ice first cooled the air, and that this cold air next increased the fields of ice.

Influence on lower latitudes.

But, whatever be the vicissitudes of the Polar ice, they cannot, in any sensible manner, affect the climates of the lower latitudes. The whole circumjacent space where frost holds his reign bears a very small proportion to the surface of the northern hemisphere. Reckoning from the parallel of sixty degrees, it would not exceed the eighth part; but, since the gelid region hardly extends below the latitude of seventy-five degrees, it may be stated at the thirty-second part of the hemisphere. On the supposition, therefore, that the Arctic cold were all transferred and infused into the atmosphere of the south, it would yet produce no perceptible alteration of climate.

Reduction of ice.

Even if we imagined with Mr Scoresby, that, during the years 1816 and 1817, two thousand square leagues of ice disappeared in the Greenland Seas between the parallels of seventy-four and eighty degrees, this extent would still scarcely exceed half the surface of Ireland. It may be calculated, that the loss of heat on our globe, occasioned by a total eclipse of the sun, reckoning this only equivalent to a complete obscuration for the space of a single hour, is as much as would be absorbed by the thawing of a circle of ice 500 miles in diameter and 150 feet thick. This quantity surpasses at least sixty times the ice-fields dispersed from Greenland, allowing them the mean thickness of thirty feet; and yet the temperature of the air is never depressed more than a degree or two during the continuance of any solar eclipse.

Chimerical ideas.

But the idea is quite chimerical, that any winds could ever transport the Polar influence to our shores. It may be proved, from the results of accurate experiment, that a current of air flowing over a warmer surface, whether of land or water, becomes, in the space of an hour, penetrated with the same temperature through a stratum of eighty feet; though the limit of actual contact, or of mutual attrition, is confined to a surface not exceeding the 500th part of an inch in thickness. If we assign to

it the height of a mile, which is a most ample allowance, it would lose all its sharpness, and acquire the standard heat in the course of sixty-six hours. Admitting this wind to travel at the rate even of twenty miles each hour, it would consequently spend all its frigorific action in a tract of 1320 miles. The gales from the remotest north must thus discharge their store of cold into the German Sea or the Atlantic Ocean. Nor could such impressions, though continued through a course of ages, have the smallest power to chill the superficial water; for the moment any portion of this was cooled, it would, from its increased density, sink down into the vast abyss. The surface would not be affected till after the cooling had, in its progress, pervaded the whole mass from the bottom upwards. According to the calculations of Laplace, founded on a comparison of the theory of tides with actual observation, the mean depth of the ocean exceeds ten English miles. Supposing, therefore, a wind blowing from some northerly point, and ten degrees colder than the water, were to sweep over the Atlantic six months every year, at the rate of fifteen miles an hour, it would take 220 years to abstract from that vast body of water a single degree of heat.*

Effect of cold winds.

Depth of ocean.

Some persons have imagined that the mountains or islands of ice, which are occasionally drifted into the Atlantic Ocean, must be sufficient, by their frigorific influence, to modify the character of our climate. One of the first who advanced that opinion was the ingenious Richard Bradley, fellow of the Royal Society, and professor of botany in the University of Cambridge. In "A Survey of the Ancient Husbandry and Gardening, col-

Influence on our climate.

* It is true that Laplace, on reviewing his intricate analysis, reduced successively the measure he had assigned for the mean depth of the ocean, without coming to any precise conclusion. But even supposing it were only five miles, or equal to the elevation of the highest mountains, the continued and absolutely concentrated action of the northern winds during more than a century would still be required, though counteracting causes were excluded, to cool down the mass of the Atlantic one degree.

CHAP. I.

lected from the Greek and Roman Writers," printed in octavo at London in 1725, he introduces the following remarkable passage :—

Bradley's opinion.

"I the rather mention the case of winds becoming cold by mixing with the effluvia of snow or ice, because I have made some remarks upon the tempestuous weather, which often happens about the end of May, or in June, which has in all my observations been brought in by westerly winds; and again, I as surely find, that at such times large islands of ice and snow are passing to the southward in the Western Ocean, as I have been informed by several captains of ships that were then coming from our plantations to England. Some of these islands are so large as to measure sixty miles in length, and yielding so great a vapour, that for a day's voyage on one side of them, the weather has been so hazy that the mariners could not discover what they were; and this was accompanied with so much cold, that they imagined they had mistaken in their accounts, and got several degrees too far towards the north; but a day or two explained the matter, and gave them an opportunity of surveying what they had been so much surprised at. Now, considering the extraordinary heat of the sun at the season these appear, the vapour must be very considerable that rises from them, and it is no wonder then, that, as it expands itself, it presses the air with violence enough to cause tempests and carry cold along with it."

Size of Icebergs.

Insignificance of their effects.

But a little reflection will convince us that such remote influence on our climate must be quite insignificant. At a very wide estimation, the surface of ice exposed to the winds could never exceed the thousandth part of the whole expanse of the Atlantic Ocean; consequently the general temperature of the air would not be altered the fortieth part of a degree. Nor could this minute impression be wafted to our shores, being invariably spent in the length of the voyage. The opinion which Mr Bradley entertained more than a hundred years ago might have been tolerated in the infancy of physical

science; but that the same notion should be revived, and proclaimed with confidence at this day, may well excite surprise.

Confirmation of theories.

These reasonings, which suggested themselves on the sailing of the first expedition sent by government to explore the Arctic Seas, have been singularly confirmed by the results of the late daring voyages. Captain Parry, by the most vigilant exertions indeed, succeeded, during the brief interval of an open season, to advance from Baffin's Bay, by Lancaster Sound, above 400 miles westwards, through floating masses of ice, on the parallel of 75 degrees; but this distance is probably not the third part of the whole space between the Atlantic and Pacific Oceans. All the subsequent attempts of that able navigator to penetrate any farther in the same direction proved unsuccessful; and his last laborious effort to reach the Pole, by dragging boats over an expanse of rough and broken ice, completely failed. The utmost exertions of the crews scarcely enabled him to proceed, in 1827, three degrees northward from Spitzbergen, and attain the latitude of 82° 45′, not far beyond the usual resort of the Greenland whalers. Captain Weddell, without any stimulant of national reward, had, four years previously, the resolution to penetrate to a very great height in the opposite hemisphere, which is always considered colder and less accessible than the northern, having advanced to the latitude of 74° 15′ in an open sea.

Captain Parry

Hypothesis of accumulating ice

On the hypothesis that the quantities of ice which encumber the Arctic Seas have been accumulating for a long succession of years, it is assumed as a fact, that throughout Europe a milder and more genial climate had formerly prevailed. A closer inspection of the details, however, will show this supposition to be destitute of any solid support. One hears continual complaints, indeed, of the altered condition of the seasons, especially from elderly persons, whose bodily frame has become more susceptible to the impressions of cold; but similar

CHAP. I.

Fanciful dangers.

lamentations have been repeated by the poets and the vulgar from the earliest times. If we listened implicitly to such querulous declaimers, we should believe that Nature has spent all her fires, and is hastening fast into decay. Immense forests, it is said, anciently clothed the highest tracts of this island and other northern countries, where scarcely a tree can now be made to grow. The period of vintage was in former ages several weeks earlier in France than at present; vineyards were planted during the time of the Romans in various parts of the south of England, where at this day even the hop-plant is raised with difficulty; and the sides of many hills in Scotland bear evident traces of the plough, which have been long since abandoned irretrievably to the dusky heath.

Answer to such forebodings.

But, in answer to such allegations, it may be observed, that a patch of wood will not thrive in cold situations, merely for want of the shelter which is afforded by extensive plantations. In Sweden and Norway, which are mostly covered with natural forests, it has become an object of police to prevent their indiscriminate destruction. The timber in those sylvan countries is cut at stated periods of its growth, and in detached portions; the vacant spaces being left as nurseries, embosomed amidst an expanse of tall trees. Some places in Sweden, where the forests have been accidentally destroyed by fire, present the image of sterility and of wide desolation.

Ancient vines.

It is probable that the vines grown in ancient times were coarser and hardier plants than those which are now cultivated. A similar observation extends to all the products of gardening. A succession of diligent culture softens the character of the vegetable tribes, and renders them more delicate, while it heightens the flavour of the fruit. The Roman soldiers stationed in Britain would naturally prefer wine, their accustomed beverage, however harsh and poor, to the *cervisia*, or unpalatable ale brewed by the rude natives.

The marks of tillage left on our northern hills prove only the wretched state of agriculture at a remote period.

Ancient agriculture.

For want of a proper system of rotation, and the due application of manure, the starving tenantry were then tempted to tear up with the plough every virgin spot they could find, and, after extracting from it a pitiful crop or two of oats, to abandon it to a periodical sterility. The cattle in those days, having no sort of provender through the winter but dry straw, were quite feeble and exhausted in the spring. The soil, too, was very stiff, from want of repeated and seasonable tillage. Under such circumstances, it affords no proof of any great heat, that the slothful peasants, oppressed with a load of clothes, usually began their operations in the field before sunrise, while preparing the ground for the reception of the barley-seed.

Former temperature.

It is very difficult to ascertain the precise condition of the weather in distant ages. The thermometer was not invented till 1590, by the celebrated Sanctorio; nor was that valuable instrument reduced to a correct standard before the year 1724, by the skill of Fahrenheit. We have hence no observations of temperature which go further back than a century. Prior to this period, we must glean our information from the loose and scanty notices which are scattered through the old chronicles relative to the state of the harvest, the quality of the vintage, or the endurance of frost and snow in the winter. Great allowance, however, should be made for the spirit of exaggeration and the love of the marvellous which infect all those rude historical monuments.

Unchanging climate of Europe.

On glancing over the incidental notices of the state of the weather, it is obvious that no material change has taken place for the last thousand years in the climate of Europe; but we may conjecture that it has gradually acquired rather a milder character; at least instances of excessive severity appear on the whole to be of rarer occurrence. The weather seems not to affect any precise course of succession, although two or more years of remarkable heat or cold often follow consecutively; yet there can be no doubt that atmospheric changes, however complicated and perplexing, are as determinate in

CHAP. I.

their nature as the revolutions of the celestial bodies. When the science of meteorology is more advanced, we shall, perhaps, by discovering a glimpse of those vast cycles which result from the varied aspects of the sun combined with the feebler influence of the moon, be at length enabled to predict, with some degree of probability, the condition of future seasons. The intermediate period of nine years proposed by Toaldo, or the semi-revolution nearly of the lunar nodes and apogee, seems not to be altogether destitute of foundation. Thus, of the years remarkably cold, 1622 was succeeded, after an interval of four periods or 36 years, by 1658, whose severity lasted through the following season. The same interval brings us to 1695, and five periods more reach to 1740,—a year very famous for cold; three periods now come down to 1767, nine years more to 1776, and eighteen years more to 1794, the cold continuing through 1795. Of the hot years it may be observed, that four periods of nine years extend from 1616 to 1652, and three such again to 1679. From 1701 to 1718 there was an interval of 17 years, or very nearly two periods, while three periods reach to 1745, another period to 1754, and one more falls on 1763; and from 1779 to 1788 there are just nine years. The year 1818 would therefore correspond to 1701, 1719, and 1746, and consequently very nearly to 1718. Again, the years 1784, 1793, 1802, and 1811, at the intervals of successive periods, were all of them remarkably warm. The dry season of 1819, and the hot summer of 1831, follow nearly the same sequence. A cycle of 54 years, therefore, including six of these subordinate periods, has lately been proposed with much confidence, but apparently on very slender grounds.

Meteorological science.

Rotation of seasons.

Hot years.

If the climate had undergone any real change in the more temperate parts of Europe, a corresponding alteration, with very distinct features, must inevitably have taken place in the Arctic regions. But a dispassionate inquiry discovers no circumstances which at all clearly point at such a conclusion. On this head we may

Relative alteration.

readily satisfy ourselves by a short retrospect of the principal facts which have been recorded by voyagers.

Greenland.

Greenland, in its position and general outline, appears to resemble the vast promontory of South America. From Cape Farewell, the Staaten Hoek (States' Promontory) of Dutch navigators, situated on a small island in the latitude of 60°, it stretches, in a north-westerly direction, to Cape Desolation, and then nearly northwards to Good Hope in latitude 64° 10′, where it inclines almost a point towards the east, so far as the island of Disco, which occupies a spacious bay in Davis' Strait, between the latitudes of 68° 30′ and 71°. Thence the continent extends about due north, beyond the latitude of 76°, till it is lost in the recesses of Baffin's Bay. On the other side Greenland stretches north-north-east 300 miles, till nearly opposite Iceland, in the latitude of 64°, and then advances almost north-east to the latitude of 75°, when, suddenly bending to the north, it holds this direction beyond Spitzbergen and the latitude of 80°. The coast is every where bold and rocky, like that of Norway; and the interior of the country consists of lofty mountains covered with eternal snows. But the western side, which forms Davis' Strait, is indented with numerous bights, creeks, and *fiords* or firths, which, for the space of two or three months each year, look verdant, and yield tolerable pasturage. The eastern shore, again, which properly bounds the Greenland Seas, can rarely be approached by the whalers, as the accumulated stream of ice, which in summer is constantly drifting from the north-east, creates a formidable barrier. The position of this icy boundary, though nearly parallel to the land, is not absolutely fixed, but varies within certain limits in different years. The late survey by Mr Scoresby was therefore not very satisfactory.

Bold coast.

Disco Bay

In Davis' Strait the whalers generally resort to Disco Bay, or push farther north; sometimes as far as the latitude of 76°, to the variable margin of the great icy continent. On the other side of Greenland, about the meridian of eight degrees east from Greenwich, the ice,

CHAP. I.

in warm seasons, retires to the latitude of 80°, beyond Hakluyt's Headland at the extremity of Spitzbergen; while at other times it advances as far south on the same line as the latitude of 70°, enveloping the whole of that island, but forming below it a wide bay, called the *Whalefisher's Bight*, on the parallel of Bear Island. The former are called *open* and the latter *close* seasons. In open seasons the ships employed in these fisheries find a channel from 20 to 50 leagues wide, through which they shoot forward along the shores of Spitzbergen, till they reach the latitude of 78° or 79°, where the whales are most abundant. The chase of these animals, in the Greenland Seas at least, seldom lasts above two months, commencing generally at the end of April and terminating with June, when they usually disappear, and the prevalence of dense fogs renders the navigation very dangerous. In Davis' Strait the fishery continues often for two or even three months longer. Mr Scoresby thinks it were better if our Greenland ships, like the Dutch and other foreigners, began their voyage somewhat later than has become the practice. In close seasons the hardy navigator is obliged, with imminent peril and hazard, to impel his ship by *boring*, under a press of sail and assisted by ropes and saws, through the drift-ice which borders the great barrier, endeavouring to follow *every vein of water* that runs nearly in the required direction. If he fail in this attempt, he must forego the chance of a profitable voyage, and content himself with the humbler pursuit of catching seals.

Whale-fishers.

Season.

Period of sailing.

The space over which the line of ice may be supposed to oscillate in the Greenland Seas, extends 1400 miles from Cape Farewell to 200 miles beyond Jan Mayen's Island, which it includes, and has a mean breadth of about 80 miles. Such is the extent of the mere surplus ice formed and dissolved from year to year,—exceeding the whole surface of Great Britain. Hence the quantity melted or liberated during the years 1816 and 1817 bore no very considerable proportion to the ordinary fluctu-

Extent of ice.

ating mass. It is therefore evident that, whatever may be the casual variations of the frozen expanse, no mighty alteration has yet taken place in the climate and condition of the Arctic Seas.

Periodical changes.

If we compare the journals of former navigators, we shall be convinced that all the changes of the Polar ice are periodical, and are again repeated at no very distant intervals of time. We may pass over the pretensions of some Dutch captains, who alleged that they had been carried by winds or currents as far north as the latitude of 88°, or even that of 89° 40′, and consequently only twenty miles from the Pole; since their estimate, at all times rude from observations with the fore-staff, was then founded on mere dead reckoning after a continuation of foggy weather. Davis, in 1587, ascended, in the strait which deservedly bears his name, to the latitude of 72° 12′, where he found the variation of the compass to be 82° west, or nearly the same as at present. In 1616, Baffin advanced, in the same quarter as high as the latitude of 78 degrees. Hudson, nine years before, had penetrated in the Greenland Seas to the latitude of 81°, and seen supposed land as high as that of 82° lying to the north-east of Spitzbergen. But it is mortifying to remark how little progress has been made in geographical discovery since those early and intrepid adventurers explored the Arctic regions with their humble barks, which seldom exceeded the size of fifty tons. We must pass over a very long interval to obtain authentic information. In 1751 Captain M'Callam, whom Mr Barrington calls a scientific seaman, sailed without obstruction from Hakluyt's Headland as high as the latitude of 83½°, where he found an open sea; and the weather being fine, nothing hindered him from proceeding farther but his responsibility to its owners for the safety of the ship. Captain Wilson, about the end of June 1754, having traversed floating ice from the latitude of 74° to 81°, at last found the sea quite clear as far as he could descry; and he advanced to the latitude of 83°, till not meeting with any whales, and

Captain Davis.

Hudson.

Captain M'Callam.

CHAP. I.

Captain Guy.

beginning to apprehend some danger, he shaped back his course. At this very time, Captain Guy, after four days of foggy weather, was likewise carried to the same point. The Polar Seas at that period must indeed have been remarkably open; for one of the most extraordinary and best-authenticated voyages was performed in 1754 by Mr Stephens, a very skilful and accurate observer, whose testimony is put beyond all manner of doubt by the cool judgment of the late astronomer-royal, Dr Maskelyne. This navigator informed him, that about the end of May he was driven off Spitzbergen by a southerly wind, which blew several days, till he had reached the latitude of 84½°, and that in the whole of this run he met with little ice and no drift-wood, and did not find the cold to be anywise excessive. In different years, since that date, the Greenland whalers have advanced to the latitude of 81 or 82 degrees. This was accomplished even in 1766; although, according to Kerguelen, the whole space between Iceland and the opposite coast was then frozen over. The year 1773, or that in which Captain Phipps performed his voyage, was still more favourable for approaching towards the North Pole. In 1806 the elder Mr Scoresby ascended to the latitude of 81° 50′; but in the following year he could not proceed farther than the parallel of 78½°. In 1811 the higher latitudes were again accessible; and, after a short interval, the summers of 1815, 1816, and 1817, are represented as open seasons; though none of the whalers penetrated so far into the north as had been done in many former years, and particularly in 1754.

Advance of Greenland whalers.

Alteration of frozen border.

In this plain statement one can perceive no decided symptoms of any general or progressive tendency towards a dissolution of the Polar ice. The frozen border alters its position from one year to another, and probably returns again to the same limits after certain short periods of time. Such fluctuations are analogous to the incessant changes which affect the state of the weather in the more temperate regions. The complex system of winds

moulds the climate, and varies the features of the seasons over the globe. It is a common remark of those who frequent the Arctic Seas, that they find the least obstruction from ice when the preceding winter has been very severe in the more southern latitudes. In the year 1766, though the frost had proved most intense through the rest of Europe, the whalers reached a high latitude; and, not to multiply instances, the three seasons preceding 1818, reckoned very open, succeeded to winters notoriously cold and protracted. Nor is it difficult to discern the reason of this seeming paradox; for our severe winters are occasioned by the prevalence of northerly winds, which must arrive at the Polar Seas from the South, and consequently transport so much warmth to them as may check the usual rigour of the frost.

Results of a severe winter.

The main argument, however, brought to prove the deterioration of the Arctic climate, is drawn from the supposed existence of a colony which had once flourished on the eastern coast of Greenland, but has for several centuries been extinct; all access to its remains being at length completely barred by the accumulation of ice. This tale, which seems to have owed its birth to Torfæus, the historian of Norway, has obtained very general credence. Yet a sober examination of the early *Sagas*, or northern chronicles, so full of wonder and fable, will show that there is no solid reason for entertaining such a notion, or believing that the first settlement of Greenland was made on the east side of the continent. The whole contexture of the original narrative indicates the very opposite conclusion.

Norse colony of Greenland.

After the North had ceased to send forth her numerous swarms upon the fertile provinces of the Roman empire, the Scandinavian nations, prompted by their peculiar situation, betook themselves to a life of maritime adventure. Those bold and hardy pirates visited every sea, and pillaged, during a course of nearly three hundred years, all the coasts of Europe, from the extremity of Scotland to the shores of Sicily. During

Scandinavian nations.

CHAP. I.

Extensive conquests.

the first half of the ninth century, they conquered the Orkneys, the Shetland and Western Isles—obtained possession of Ireland—plundered England and France—and extended their ravages to Italy. In 876 the Northmen, or Normans, extorted from the weakness of the French king the cession of the fine province of Neustria, where they quietly settled; while another party of these fierce invaders had occupied the fertile coast of Esthonia, on the south side of the Baltic.

Voyages of discovery.

But the visits of those intrepid navigators were not confined to the richer countries of the South. They carried ravens with them, for the purpose of discovering distant land by the direction in which these powerful and sagacious birds took their flight. In 861 Nadodd, a roving pirate, in one of his voyages in the northern seas, happened to be cast away on an island which he called *Snowland*. Three years afterwards, Garder and Flocke, two Swedes, visited it; and having found a great quantity of drift-ice collected on the north side of it, they gave it the name of *Iceland*, which it still bears. But in 874 Ingolf and Leif, two famous Norwegian adventurers, carried a colony to this inhospitable region, —the latter having enriched it with the booty which he had ravaged from England. Other emigrants, whom the disorders of the times drove successively from home, resorted in crowds to the new settlement, which became very considerable in the space of a few years.

Snowland

Iceland.

Iceland itself was able, after the progress of about a century, to send out likewise her colonies. Thorwald, a proud and opulent Norwegian chief, who had been lately banished thither from the court for some murder committed by him, soon died in exile, leaving his wealth and his restless spirit to his son Eric *Raude*, or the *Red*. This youth, actuated by the same vengeful passions, killed one of his neighbours in a fight, and was obliged to withdraw himself from Iceland for the space of three years. In 982 Eric sailed in quest of adventure and discovery. Instructed by the reports of former navigators, he directed his course towards the south-west.

After a quick run, he descried two lofty mountains, the one covered with snow and the other cased with ice, which he called *Huitserken* and *Blaaserken*, or *the White Shirt* and *the Blue Shirt*, and soon reached a headland which he doubled; and having entered a spacious creek, he spent the winter on a pleasant adjacent island. In the following season, pursuing his discoveries, he explored the continent, and was delighted with the freshness and verdure of its coast. Contrasting this new country with the dark rocks of Iceland, he bestowed on it the flattering appellation of *Greenland;* and on his return invited settlers to join him, by circulating the most glowing and exaggerated descriptions. With twenty-five vessels he sailed back again; but of these only fourteen reached their destination. This colony was soon augmented by the arrival of numerous adventurers, not only from Iceland, but from the Orkneys and other islands planted by the Norwegians. In the year 999, Leif, a son of Eric Raude, having visited the court of Norway, was induced, by the zealous and earnest solicitation of King Olaf Tryggeson, to embrace the Christian faith; and, carrying with him some monks, he found, through their ministry, no great difficulty in persuading his father and the rest of the settlers to forsake the rites of paganism.

White Shirt and Blue Shirt.

Greenland.

The first colony having extended itself along the coast to a wide firth, another settlement beyond that boundary was established farther towards the west. The former called *Oestre Bygd*, or the *Eastern Settlement*, is said to have included, in its most flourishing state, twelve parishes and two convents; and the latter, termed *Vestre Bygd*, or the *Western Settlement*, contained four parishes. The colonists of Greenland were compelled to lead a life of hardship and severe privation. They dwelt in hovels surrounded by mountains of perpetual ice; they never tasted bread, but subsisted on the fish which they caught, joined to a little milk obtained from their starving cows; and with seal-skins and the tusks of the walrus they purchased from the

Eastern colony.

Western colony.

CHAP. I.

traders who occasionally visited them the wood required for fuel and the construction of their huts.

Position of the colony.

Combining the several circumstances together, it seems clear that the original colony of Greenland began about the southern promontory, near Cape Farewell, and stretched along the coast in a north-westerly direction. Farther north, and probably as high as the latitude of 60°, the second settlement was formed.* For some centuries both of them maintained a sort of commercial intercourse with Norway; but this trade became afterwards very much reduced, in consequence of its being seized as an exclusive privilege of the Danish court. About the year 1376, the natives of the country, or Esquimaux invaders, whom the Norwegian settlers had in contempt called *Skrælings* or *Dwarfs*, attacked the western colony, which now claimed the assistance of its elder brother. The scanty population, however, was enfeebled by such repeated alarms; and that dreadful pestilence, termed the *Black Death*, which raged throughout Europe from the year 1402 to 1404, at last extended its ravages to Greenland, and nearly completed the devastation. In fertile regions the waste of the human species is always quickly repaired; but poor and barren countries can seldom recover from the depression caused by such severe calamities. The colonies which occupied Greenland appear to have languished near one hundred years afterwards, till they became finally extinct about the commencement of the sixteenth century.

Esquimaux invasion.

Black Death.

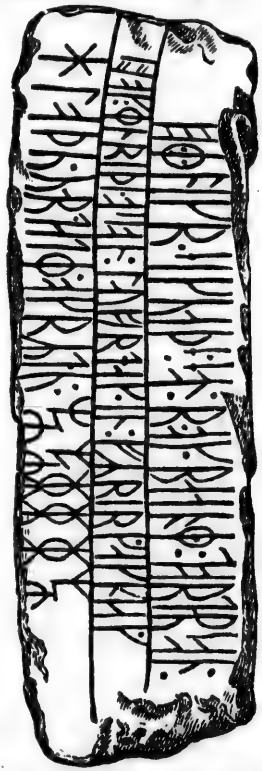
Destruction of both settlements.

But a notion has very generally prevailed, that only the western settlement of Greenland had perished, while the eastern was merely secluded from communication

* A curious monument has been lately discovered, that attests the zeal with which the early Scandinavian adventurers pushed their settlements to the most northern parts of Greenland. It is a stone carved with Runic characters, found in 1824, planted erect in the ground on the island of Kingiktorsoak, under the parallel of 73°. The inscription has been translated by Dr Rafn, Secretary of the Royal Antiquarian Society of Copenhagen, as follows:—

with the rest of the world by a vast barrier of ice, which had at length accumulated on its shores. The only

"Erling Sigvatson, and Bjarne Thordarson, and Endride Oddson, erected these memorial-stones and cleared the place, on Saturday before Gagndag (*the 25th of April*), in the year 1135." Scandinavian runic inscription.



Those enterprising settlers must therefore have, as early as the twelfth century, come into communication with the Esquimaux of North America. Allowing for the difference of style at that epoch (being three days for every four centuries), the stone was erected on the 1st of May, at which time the ground seems to have been covered with snow.

*For this curious notice the author is indebted to his very ingenious, learned, and amiable friend, Dr T. Stewart Traill of Liverpool.**

* Dr Traill has, since the date of this acknowledgment by Sir John Leslie, been appointed Professor of Medical Jurisprudence in the University of Edinburgh.

CHAP. I.

Fate of the settlers.

question lately entertained was, whether these ill-fated colonists survived the catastrophe, or were suddenly entombed in ice and snow, as the unhappy citizens of Herculaneum were anciently involved in a dense shower of volcanic ashes. Tremendous stories are told of the east side of Greenland being now tenanted by giants and stalking ghosts. For more than a century past the court of Denmark has, at different times, despatched ships to search after its lost colony, the crews of which, evidently under the impression of superstitious awe, found it impossible to penetrate on that enchanted coast farther than Cape Discord, in the latitude of 61°. But in favourable seasons small boats can, without much difficulty, creep along the shore to a much higher parallel. If any settlers had ever occupied the narrow bays, they might surely have escaped either in their canoes or in sledges.

Fabulous accounts.

The supposed existence of a colony on the east side of Greenland is clearly a fable, originating in a misapprehension of the import of the designations applied severally to the two settlements. The one first made lay no doubt to the east, as well as to the south of the other; but the ships which resorted from Norway held a westerly course for them both. Between them a

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But such was the scrupulous anxiety of the publishers to procure the most accurate information, that they stopped the press to consult a gentleman in this country, deeply skilled in the Runic,—Mr Repp of the Advocates' Library,—who has obligingly furnished the following reading of the inscription, with a translation somewhat different:—

"Oelligr Siguathssonr ok Baaos Tortarson ok Oenrithi Osson: Laugardagin fyrir gagndag hlóthu Varð dis ok rytu." (*The five last figures of the inscription are utterly unknown.*)

That is, "Oelligr Sighwathson, and Baaos Tortarson, and Oenrithi Osson, on the Saturday before *Gagndag** erected *Thorvard's* monument, and wrote this." (*And then the compound characters.*)

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* Gagndagr, in nominative, of which we have here the accusative case Gagndag, were two holidays of the Catholic Church in Iceland. There was a *greater* and a *lesser*.—(Gagndagrin Meiri ok Minni). As to the exact time when they occurred, see "Finni Johannæi Historia Ecclesiastica Islandiæ," under the word Gagndag in the Index, vol. iv.

mutual intercourse appears likewise to have been maintained, which surely could not have taken place had they been divided by a chain of lofty and impassable mountains covered with eternal snow. Besides, traces of those ancient settlements are observed, even at present, scattered along the western shores of Greenland, as low down as the latitude of 61°, though not corresponding altogether with the poetical descriptions of the Icelandic Sagas. Except the very scanty ruins of a church, the only vestiges now remaining consist of low naked walls, which must have served as pens for sheltering the cattle.

Intercourse with Norway.

It may be safely affirmed that the settlements which, during the last hundred years, the Danes have been forming at various points on the western side of Greenland are more numerous and thriving than those which existed at any former period. They consist of twenty-one colonies, stretching over an extent of 800 miles. The first establishment is only a single family, occupying Bear Island, a little to the east of Cape Farewell. Ten other hamlets, composed chiefly of Moravians, are planted at different points, from the latitude of 60° to that of 68°. Three settlements are distributed round Disco Bay, about the latitude of 69°; and seven more have been extended thence as high as the latitude of 73°. So far, therefore, from the population having been extirpated by the increased severity of the climate, the truth appears to be, that the present establishments on the coast of Greenland extend ten degrees farther north than the ancient settlements at their most flourishing period. This advance of the colonies has been owing, no doubt, to the increased activity of the whale-fisheries, and to the circumstance of these pursuits having been lately carried with success into Davis' Strait. But there is nothing certainly in their history which betrays any radical or permanent change in the climate of the Arctic regions. The same continent of ice still remains during the far greater part of the year, to bar the access of the navigator to the Pole.

Modern settlements.

Advance of the colonies

CHAPTER II.

Animal and Vegetable Life in the Polar Regions.

Remarkable Profusion of Animal Life—Means by which it is supported—The Cetacea: Whale, Narwal, Walrus, Seal—The Herring——Land Animals—The Polar Bear; Its Ferocity; Anecdotes—The Rein-deer—Wolf, Fox, Dog—Birds—Vegetable Life—Peculiar Plants—Red Snow.

CHAP. II.

Aspect of the northern world.

Resources of nature.

WHEN we contemplate the aspect of the northern world,—bleak, naked, dreary, beaten by the raging tempest, and subject to an extremity of cold which with us is fatal to life and to all by which life is supported,—we naturally imagine that animal nature must exist there on a small scale, and under puny forms. It might be expected that only a few dwarf and stunted species would be scattered along its melancholy shores, and that the animating principle, as it attempted to penetrate those realms of desolation, would grow faint and expire. But, on the contrary, Nature, whose ways and power far surpass human comprehension, makes a full display of her inexhaustible resources. She has filled the naked rocks and wintry seas with a profusion of organized beings, such as are scarcely brought forth under the most genial glow of tropical suns; storing them with the mightiest of living things, compared to which the elephant and hippopotamus, which rear their immense shapes amid the marshy plains of the tropics, seem almost diminutive. Even the smaller species, of which the herring may be taken for an example, are found amid the depths of the Arctic zone, in shoals which astonish by their immensity. The air, too, is darkened by in-

numerable flocks of sea-fowl, while, even upon the frozen surface of the land, animals of peculiar form find food suited to their various wants.

Source of life.

By what means, or by what resources, does she support, in such circumstances, this immensity of life? Wonderful as are her operations, they are always conducted agreeably to the general laws imposed upon the universe; and we shall find, in the structure and condition of the animal world, the powers by which its various members are enabled to defy this frightful rigour of the elements. Some of the provisions whereby their frames are adapted to the extremes of climate, have, at first sight, the appearance of direct interposition; yet a more profound investigation always discovers the causes of them to be deeply lodged in their physical organization.

Creative energy.

It is on the seas and shores of the Arctic zone that we chiefly observe this boundless profusion of creative energy; and in conformity with that arrangement by which Nature supports the inhabitants of the waters, by making them the food of each other, so here also we observe a continued gradation of animals, rising one above another, the higher preying upon the lower, till at last an aliment is provided for those of largest bulk and most devouring appetite.

Medusa.

The basis of subsistence for the numerous tribes of the Arctic world is found in the genus *Medusa* of Linnæus, which the sailors graphically describe as sea-blubber. This is a soft, elastic, gelatinous substance, specimens of which may often be seen lying on our own shores, exhibiting no signs of life except that of shrinking when touched. Beyond the Arctic circle this production increases in an extraordinary degree, and is eagerly devoured by all the finny tribes. By far the most numerous, however, of the medusan races are of dimensions too small to be discerned without the aid of the microscope,—the application of which instrument shows them to be the cause of a peculiar tinge observed over a great extent of the Greenland Sea. This colour is olive-green, and the water is dark and opaque compared to that which bears the common

CHAP. II.

Colour of the sea.

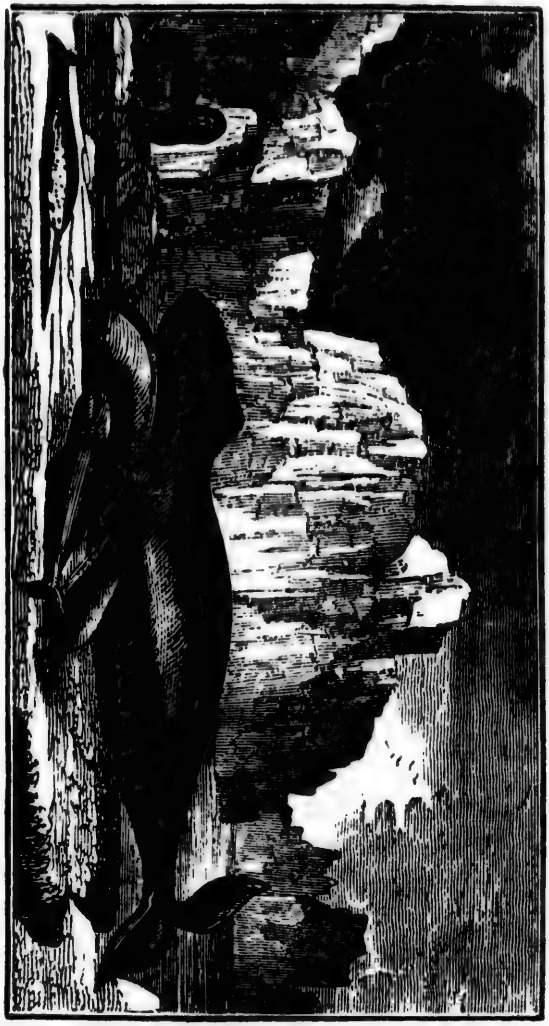
cerulean hue. The portion of the ocean so distinguished amounts to not less than 20,000 square miles; and hence the number of animalcules which that space contains is far beyond calculation. Mr Scoresby estimates that two square miles comprehend 23,888,000,000,000,000; and as such an amount is above the range of human words and conceptions, he illustrates it by observing that 80,000 persons would have been employed since the creation in counting it. This green sea may be considered as the Polar pasture-ground, where whales are always seen in the greatest numbers. These prodigious creatures, it is true, cannot derive any direct subsistence from particles so very small; but these last form the food of other minute fishes, which in their turn support a third series, till at length, as has been already remarked, animals are produced of such size as to afford a morsel for the mighty devourers. The genus *Cancer*, of the same writer, or

Crustacea.

members of the class *Crustacea*, appear to rank second in number and importance. They present themselves under the various species of the crab, and, above all, of the shrimp, whose multitudes rival those of the medusa, and which in all quarters are seen either pursuing their prey, or becoming the food of a higher class of marine animals. So carnivorous, indeed, are the northern shrimps, that joints of meat hung out by Captain Parry's crew from the sides of the ship were in a few nights picked to the very bone. Many of the zoophytical and molluscous orders, too, particularly *Actinia*, *Sepia*, and several species of marine worms, are employed by Nature as the means of supplying food to various inhabitants of the deep possessing a more perfect organization.

Cetacea.

Among the numberless tribes of living things which people the northern seas, one order stands highly conspicuous. These are the *Cetacea*, comprehending the largest of existing animals, and having a structure wholly distinct from every other species. Although their home be entirely in the depth of the waters, they have several features in common with quadrupeds, and, in fact, belong



Whale with its Cub, Narwal, &c

to the Linnæan class of *Mammalia*, or suck-giving creatures. They produce their young alive; their skin is smooth and without scales; their blood is warm; and the flesh tastes somewhat like coarse beef. They have a heart with two ventricles, and lungs through which they respire; and being unable to separate the air from the water, as fishes do by means of their gills, they must come to the surface in order to breathe. It is thus by no means strictly scientific to call the whale a fish; yet he is entirely an inhabitant of the sea, having a tail, though placed in a different position from that of ordinary fishes, while his front limbs much more resemble fins than legs, and are solely used for pawing the deep. Hence the vulgar, following a natural and descriptive classification, obstinately continue to give the name of fish to these watery monsters. But the most characteristic and important feature of the *Cetacea*, consists in a thick layer of fatty substance, called blubber, lodged beneath the skin and surrounding the body, which yields, on expression, nearly its own bulk of thick, coarse, viscid oil. It is by this covering that Providence enables them to defy the utmost extremity of cold, and to preserve a strong animal heat even under the eternal ice of the Pole. Yet this substance, being subservient to the uses of man, has roused a dreadful and deadly enemy, who employs against them the resources of *art*,—a power which mere brutal force seeks in vain to oppose. He pursues them through ice and tempest, and dyes the seas with their blood. They themselves are meek, peaceful, sluggish; and man, in the contest which he wages with them, is almost always the aggressor; though the resistance which he then encounters is sometimes terrible, and his life is occasionally the forfeit.

Young of the whale.

Not a fish.

Blubber.

Among the cetaceous tribes the chief place is due to the *whale*, of all animals "mightiest that swim the ocean stream." Enormous as his bulk is, rumour and the love of the marvellous have represented it as being at one time much greater, and the existing race as only

Chief of the cetaceous tribes.

CHAP. II.

Extreme length.

the degenerate remnant of mightier ancestors. Mr Scoresby, however, by collecting various good authorities, has proved that sixty feet was always nearly the utmost length of the *mysticetus*, or great Greenland whale. Of 322 individuals in the capture of which that gentleman was concerned, none occurred of a length exceeding 58 feet; and he therefore places no reliance on the report of any specimen exceeding 70 feet. Even 60 feet implies a weight of 70 tons, being nearly that of 300 fat oxen. Of this vast mass, the oil in a rich whale composes about thirty tuns, and when, as was the case some years ago, that article brought £55 or £60 per tun, we may form some idea of the great value of the prize. The bones of the head, fins, and tail, which are also valuable, weigh eight or ten tons. The oleaginous substance, or blubber, forms a complete wrapper round the whole body, from eight to twenty inches in thickness. The head is disproportionally large, being about a third of the entire bulk; and the lips, nearly twenty feet long, display, when open, a cavity capable of receiving a ship's jolly-boat with her crew. The whale has no external ear; but, when the skin is removed, a small aperture is discerned for the admission of sound. This sense accordingly is very imperfect; yet the animal, by a quick perception of all movements made on the water, discovers danger at a great distance. The eyes are likewise on a small scale, though the sense of seeing is acute; more so, however, through clear water than in the open air. But the most unique feature in the structure of this animal consists in the *spiracles* or blow-holes, placed nearly on the crown of the head. These have been compared to natural *jets d'eau* throwing up water to the height of 40 or 50 feet; though the more careful scrutiny of Mr Scoresby ascertained that they emit only a moist vapour, and are neither more nor less than huge nostrils. When, however, this vehement breathing or blowing is performed under the surface, a considerable quantity of water is thrown up into the air. The sound thus occasioned is the only

Weight.

Disproportionate size of head.

Spiracles

thing like a voice emitted by the animal, and, in the case of a violent respiration, it resembles the discharge of a cannon.

The tail. The tail is the most active limb of this monarch of the deep, and the chief instrument of his motion. It does not rise vertically like that of most fishes, being flat and horizontal, only four or five feet long, but more than twenty feet broad. It consists of two beds of muscles, connected with an extensive layer surrounding the body, and enclosed by a thin covering of blubber. Its power is tremendous. A single stroke throws a large boat with all its crew into the air. Sometimes he places himself in a perpendicular position with the head downwards, and, rearing his tail on high, beats the water with awful violence. On these occasions the sea foams, and vapours darken the air; the lashing is heard several miles off, like the roar of a distant tempest. At other times he makes an immense spring, and lifts his whole body above the waves, to the admiration of the experienced whaler, but to the terror of those who see for the first time this astonishing spectacle. Other motions, equally indicative of his boundless strength, attract the attention of the navigator at a great distance.

The fins. The fins, called by the French *nageoires*, and by Dr Fleming "swimming-paws," are placed immediately behind the eyes. They are nine feet long, enclosed by very elastic membranes, and provided with bones similar in form and number to those of the human hand. Such is the spring and vitality of the parts, that, if we may believe De Reste, they continue to move for some time after being separated from the body. According to Mr Scoresby, however, while the whale swims these organs lie flat on the surface of the water, and are not at all instrumental in producing his motion, which arises entirely from the tail. The fins merely direct and steady the movement, and serve rather as a helm than as oars.

Gestation. The period of gestation in the whale is nine or ten months, and the female brings forth in February or March. She is viviparous; that is, the young come forth

CHAP. II.

The suckers.

alive, not enclosed in an egg; and usually, there is not more than one at a time. These nurslings, about fourteen feet long and weighing somewhat more than a ton, are watched over by the female parent with the most tender care. The whalers strike the *suckers*, as they are called, not for their own value, but knowing that the mothers will start forth in their defence. Then ensues a contest hard and perilous, but commonly attended with a prosperous issue, for she never seeks safety in flight. She rushes upon the boat, drags the line with extraordinary force, tosses to and fro in extreme agony, and suffers herself to be struck by repeated harpoons without attempting to escape; while the humane captain has his triumphant feelings damped by the consideration, that his prize has fallen the victim of maternal tenderness. According to indications afforded by notches in the bone, which seem not, however, very distinctly ascertained, the whale does not attain his full growth under twenty-five years, and is said to reach a very great age.

Maternal fondness.

Varieties of the whale.

There is a considerable variety of these animals. The *Balæna physalis* (*Balænoptera gibbar* of La Cépède), called by the sailors *razorback* is considerably longer than the mysticetus; and, though his circumference be smaller, he is on the whole larger and much more powerful. He is also swifter, swimming at the rate of twelve miles an hour; and Mr Scoresby has seen one, when struck with a harpoon, run off 480 fathoms of line in a minute. An individual of this species, found dead in Davis' Strait, measured 105 feet in length. It is, as might be apprehended, extremely dangerous to attack him; for, by the extreme rapidity of his motion, he often breaks the line, or obliges the sailors to cut it in order to escape destruction. Martens mentions an instance of one which dragged a boat with its crew among loose ice where they all perished. Besides, as this fish contains only ten or twelve tuns of oil, of an inferior quality, the whalers generally shun the encounter, unless when they are disposed for a daring adven-

ture, or mistake him, as they frequently do, for a mysticetus. Besides the two pectoral fins, he has a horny protuberance or fin at the extremity of the back, which part of the body, instead of being round as in the other variety, rises into a narrow ridge. The *Balæna musculus* or broad-nosed whale, the *Balæna rostrata* or beaked whale, and the *Balæna boops* or finner, may be considered as razorbacks on a smaller scale, with certain specific distinctions. It is usually individuals of the kinds now described that frequent the coasts of Norway and Shetland, and sometimes make their appearance in the British firths; but neither they nor the physalis ever attract the attention of an experienced fisher.

Balæna musculus.

The only species, besides the mysticetus, regularly sought after, is the *cachalot* (*Physeter microps*) or spermaceti whale. This variety occurs occasionally in the northern seas, especially on the American coast, but abounds chiefly in the waters bordering on the Antarctic zone, and is the main object of pursuit in the southern fishery. The cachalot does not seem to have met Mr Scoresby's observation, although a male was thrown ashore at Limekilns on the Forth, as described by Sir Robert Sibbald; but, according to the description of De Reste and others, this species is distinguished by a long row of teeth on the lower and none on the upper jaw; the back has a peculiar form, with a small bunch behind; and the tail is of extraordinary breadth. They appear in large herds; while the mysticetus, called by our fishers the *right* whale, is generally found single. These bands very often amount to two hundred, which are said to be for the most part female, and usually under the guidance of a male of very large dimensions. To attack them is a formidable undertaking; but success is very advantageous, since ten or twelve sometimes fall in one encounter. The perils of this fishery are described as almost exceeding belief; for which reason, it is to be regretted that Captain Day's modesty makes him decline recounting any of those which he witnessed. The quantity of oil is much smaller than in the mys-

Cachalot.

Found in Herds.

CHAP. II

Value of spermaceti.

ticetus, usually not exceeding three tuns; but, from its being mixed with the substance called spermaceti, is far superior in value. When warm it is fluid; but on being poured into water it congeals into large flakes. This whale yields also the peculiar aromatic substance called ambergris, formed under certain circumstances in the rectum, and voided as fæces.

Narwal.

Another species, called the *narwal*, about sixteen feet long and eight in circumference, appears to differ little from a small whale, except in a tusk projecting from his upper jaw three to ten feet in length, which, suggesting to the sailors the idea of a horn, has procured for him the appellation of the sea-unicorn. He is swift, yet is taken without much difficulty, and yields two or three tuns of very fine oil. The dolphin, another cetaceous animal of poetic fame, occasionally occurs; and the grampus often appears in numerous herds, guided by some of larger size. The *beluga*, or white whale, is also a separate species, distinguished chiefly by its peculiar colour.

Amphibious species.

All the shores and borders of the Arctic zone are crowded with amphibious species, which appear to form an intermediate link between whales and quadrupeds,—the *Mammalia* of the sea and those of the land. Among these is to be distinguished the morse or walrus (*Trichecus rosmarus*),

Walrus.

which bears such a resemblance to our domestic quadrupeds that sailors, according to their various impressions, have given it the title of sea-horse or sea-cow. It is a large, shapeless, unwieldy creature, 12 to 15 feet in length and from 8 to 10 in circumference; the head small, the limbs short, of an intermediate character between fins and legs. As a defence against the extreme cold, these animals not only have skins an inch thick, covered with close hair, but enjoy, like the other *Cetacea*, a coating of oily fat, with which their bodies are completely enveloped. Thus cased, they lie stretched on the ice in the depth of winter, without suffering any inconvenience. The most remarkable feature of the walrus, however, consists in

two teeth or tusks, which project in a curved line from the upper jaw, and are nearly two feet in length. They are of beautiful white bone, almost equal to ivory, and much used in the fabrication of artificial teeth. The front face, when seen at a little distance, bears a striking resemblance to the human; and its appearance is suspected to have sometimes given rise to the fanciful reports of mermaids in the northern seas. Like all the cetaceous tribes, to which the walrus is allied, he is disposed to be peaceful and harmless. Captain Parry describes the supine security with which a number of them lay on the ice, piled over each other, without discomposing themselves at the approach of a party armed for their destruction. In Spitzbergen, however, where they have been long the object of chase to the Russian hunters, they are reported to keep very strict watch; it being said that one stands guard while the others sleep. Even when sensible of danger, they are not forward to face it, but rather shun the attack by rushing beneath the ice, while those behind, with their tusks, urge forward their companions. Yet, when they are compelled to combat, they give battle with the utmost coolness and courage; they then stand firm by each other, rush in one united body against the boats, and, striking with their tusks, endeavour to overset them. When repulsed, too, they repeatedly rally, and in the end yield only to the fire-arms of Europeans, or to the stratagems of the Esquimaux. Maternal tenderness, and the determination with which the female defends her young, are equally conspicuous in them as in the whale species.

Walrus ivory.

Outlook

Courage.

The seal, an animal well known on all the shores of Europe, requires not to be particularly described. The Arctic species are very numerous, and are applied by the Esquimaux for a great variety of purposes. They furnish food for his table, oil for his lamp, clothing for his person; even their bones and skins supply materials for his light portable boats and his summer tents.

The seal.

CHAP. II.

Herring shoals.

Before quitting the Polar Ocean we must notice another fish, whose periodical appearance renders it familiar to all the European coasts. Those waters, as already observed, apparently so chill and ungenial, contain not only an ample store of animal life, but a vast superabundance, with which they have been supposed to supply the seas of the more temperate climates. From them, in particular, if we may believe some naturalists, are derived the valuable tribes of the herring; the immense shoals of which, according to Bloch, Pennant, and others, issue from the frozen depths about January, and in March appear on the coasts of Iceland. Their column at this time, confined between Greenland and the North Cape, is of comparatively small breadth, but so dense that the water is darkened by them; any wooden vessel let down brings up several: they may even be taken by the stroke of a lance. They follow certain of their number larger than the rest, called kings. These leaders are held in much respect by the Dutch, who studiously spare their majesties, and even liberate them when found in the net, lest, deprived of this royal guidance, the nation should not find the way to their accustomed haunts. After

Scottish fisheries.

emerging from the Greenland Sea, this great army divides into two wings,—the right and largest bearing down directly upon Scotland; at the north-eastern extremity of which it forms that immense field wherein the Dutch for many years carried on their great national fishery. A detachment smaller in number, but some of which attain to superior excellence, fills the western bays of Scotland, and, passing along Ireland, reaches the neighbouring coast of France. Meantime the left, or smaller wing, after ranging the Norwegian shore, enters the Baltic. In July all these divisions

Return northward.

halt, and by an unknown impulse begin to retrace their course towards their northern home. De Reste considers it certain that the herrings, in returning, have a general point of rendezvous which still remains unknown; but it should seem that nothing less than the

Arctic Animals—Polar Bear, Rein-deer, Wolf, Fox, Dog, &c

actual discovery of this place of meeting can ascertain its existence. However, about the end of September they reach their destination beneath the ice of the Polar regions, where they remain three months,—all the rest of the year being spent in wandering over the face of the ocean.

Northern rendezvous.

Such is the theory of the annual appearance of the herring, which has been adopted without sufficient investigation by many popular writers. Later observation, accordingly, has thrown doubts upon the principle of Arctic migration, and referred this periodical appearance upon the coasts of Europe to that instinctive impulse which guides the finny tribes, at the season of reproduction, to places where the spawn may be deposited and the young find food. When this is accomplished, they retire from the shores to their habitation in deeper waters. The female, when taken in our seas, is commonly found to contain a roe; and as this comprises the embryo of ten thousand future herrings, such a prodigious fecundity easily repairs all the havock committed upon the species, not only by their brethren of the deep, but also by the ingenuity of man, constantly exerted for their capture and destruction.

Later observations.

Prodigious fecundity.

The other animals which frequent the Polar regions belong chiefly or wholly to the land.

In caves, or in the hollows of the ice, dwells the most formidable of Arctic quadrupeds, the Greenland bear. This tyrant of the cliffs and snows unites the strength of the lion with the untameable fierceness of the hyena. A long shaggy covering of white soft hair and a copious supply of fat enable him to defy the winter of this rigorous climate. Hence, when exposed even to the moderate heat of Britain, he appears to labour under great uneasiness. Pennant saw one, over whom it was necessary from time to time to pour large pailfuls of water. Another, kept for some years by Professor Jameson, evidently suffered severely from the comparative warmth of an Edinburgh summer. The haunt of this voracious inhabitant of the Polar regions

Greenland bear.

Endurance of cold.

CHAP. II.

Mode of crossing the sea.

is on the frozen shore, or on mountains of ice, sometimes two hundred miles from land; yet he is not, strictly speaking, amphibious. He cannot remain under water above a few moments, and he makes his way to sea only by swimming from one icy fragment to another. Mr Scoresby limits his powers in this respect to three or four miles; yet Parry found one in the centre of Barrow's Strait, where it was forty miles across.

His prey.

His prey consists chiefly of the smaller cetacea and of seals, which, unable to contend with him, shun their fate by keeping strict watch, and plunging into the deep waters. With the walrus he wages a fierce and doubtful war; and that powerful animal, with his enormous tusks, frequently beats him off with great damage. The whale he dares not attack, but watches anxiously for the huge carcass in a dead state, which affords him a prolonged and delicious feast: he scents it at the distance of miles.

Precarious supplies.

All these sources of supply being precarious, he is sometimes left for weeks without food, and the fury of his hunger then becomes tremendous. At such periods man, viewed by him always as his prey, is attacked with peculiar fierceness.

Conflicts with the polar bear

The annals of northern navigation are filled with accounts of the most perilous and fatal conflicts with the Polar bear. The first, and one of the most tragical, was sustained by Barentz and Heemskerke, in 1596, during their voyage for the discovery of the north-east passage. Having anchored at an island near the Strait of Waygatz, two of the men landed, and were walking on shore, when one of them felt himself closely hugged from behind. Thinking this a frolic of one of his companions, he called out, in a jocular tone, "Who's there! pray stand off." His comrade looked and screamed out, "A bear! a bear!" then running to the ship alarmed the crew with loud cries. The sailors ran to the spot, armed with pikes and muskets. On their approach the animal very coolly quitted the mangled corpse, sprang upon one of the assailants, carried him off, and plunging his teeth into his body, began drinking his

blood at long draughts. Hereupon the whole party, struck with terror, turned their backs, and fled precipitately to their vessel. On arriving there they began to look at each other, ashamed in some measure of their pusillanimous conduct. Three of them immediately resolved to avenge the fate of their countrymen, and to secure for their remains the rites of burial. They advanced, but fired at first from so great a distance that all of them missed. The purser then courageously proceeded in front of his companions, and, taking a close aim, pierced the monster's skull, immediately below the eye. The bear, however, merely lifted his head, and ran towards them, holding still in his mouth the victim whom he was devouring; but seeing him stagger, the three rushed on with sabre and bayonet, and soon despatched him. They collected and bestowed decent sepulture on the mangled limbs of their comrades; while the skin of the animal, thirteen feet long, became the prize of him who fired the successful shot.

Combat with a bear.

The history of whale-fishing records a number of remarkable escapes from the Polar bear. In 1668, Jonge Kees, the master of a Dutch ship, undertook with two canoes to attack one, and with a lance gave him so dreadful a wound in the belly that his immediate death seemed inevitable. Anxious, therefore, not to injure the skin, Kees merely followed the animal till he should drop down dead. The quadruped, however, having climbed a little rock, made a spring from the distance of twenty-four feet upon the skipper, who, taken completely by surprise, lost hold of the lance, and fell beneath his assailant, which, placing both paws on his breast, opened two rows of tremendous teeth, and paused for a moment, as if to show him all the horrors of his situation. At this critical instant a sailor, rushing forward with only a scoop, succeeded in alarming the monster, which made off, leaving the captain without the slightest injury.

Escape from a bear.

Perilous position.

In 1788, Captain Cook of the Archangel, when near the coast of Spitzbergen, found himself suddenly at-

CHAP. II.

Remarkable escape.

tacked by a bear. He instantly called on the surgeon who accompanied him to fire; which the latter did with such admirable promptitude and precision, that he shot the beast through the head, and delivered his commander. Mr Hawkins of the Everthorpe, in July 1818, having pursued and twice struck a large one, had raised his lance for a third blow, when it sprang forward, seized him by the thigh, and threw him over its head into the water. Fortunately it used this advantage only to effect its own escape. Captain Scoresby mentions a boat's crew which attacked a bear in the Greenland Sea; but the animal having succeeded in climbing the sides of the boat, all the men dropped themselves for safety into the waves, where they hung by the gunwale. The victor entered triumphantly, and took possession of the barge, where it sat quietly till it was shot by another party. The same writer mentions the ingenious contrivance of a sailor, who, being chased by one of these creatures, threw down successively his hat, jacket, handkerchief, and every other article in his possession, when the pursuer pausing at each, gave the seaman always a certain advantage, and enabled him finally to regain the vessel.

Mode of attack.

Though the voracity of this savage creature is such that he has been known to feed on his own species, yet maternal tenderness is as conspicuous in the female as in other inhabitants of the frozen regions. There is no exertion which she will not make for the supply of her progeny. A she-bear, with her two cubs, being hunted by some sailors across a field of ice, and finding that, neither by example nor by a peculiar voice and action, she could urge them to the requisite speed, applied her paws and pitched them alternately forward. The little creatures, as she came up, threw themselves before her to receive the impulse, and thus both she and they escaped from danger.

Maternal tenderness.

None of the varieties, indeed, are devoid of intelligence; while their schemes for entrapping seals and

other animals on which they feed often display considerable ingenuity. The manner in which the Polar bear surprises his victim is thus described by Captain Lyon:—On seeing his intended prey he gets quietly into the water, and swims to a leeward position, from whence, by frequent short dives, he silently makes his approaches, and so arranges his distance, that at the last dive he comes to the spot where the seal is lying. If the poor animal attempts to escape by rolling into the water, he falls into the paws of his enemy; if, on the contrary, he lies still, his destroyer makes a powerful spring, kills him on the ice, and devours him at leisure. Some sailors, endeavouring to catch a bear, placed the noose of a rope under the snow, baited with a piece of whale's flesh. He, however, contrived, three successive times, to push the noose aside, and unhurt to carry off the bait. Captain Scoresby had half-tamed two cubs, which used even to walk the deck; but they showed themselves always restless under this confinement, and finally sought relief in their native element.

Ingenuity.

Catching seals.

According to Pennant and other writers, the bear forms chambers in the great ice-mountains, where he sleeps during the long Arctic night, undisturbed by the roar of the tempest; but this regular hibernation is doubted by many recent observers. The fact seems to be, that the males roam about all winter in search of prey, not being under the same necessity of submitting to the torpid state as the black bear of America, which feeds chiefly on vegetables; but the females, who are usually pregnant in the more rigorous season, seclude themselves nearly the whole time in their dens.

Hibernation.

The animals which belong entirely to the land, and feed on herbage, are, in a climate covered with snow nine months in the year, necessarily few both in number and species. The rein-deer, a most patient and useful creature, an inhabitant of the Polar regions, may be said to subsist as far north as animal life can

Herbiverous animals.

CHAP. II.

Rein deer.

be maintained. To the Laplander he is all in all; and in that dreary portion of the globe he can always dig from under the snow the moss or lichen, his favourite food. Even in the severer climates he carries his summer-excursions as far as men have yet penetrated; but at the end of October the intense frost no longer allows him to reach even the simple pasture in which he delights. It is then that large herds are observed to assemble and migrate to the southward. From Melville Island they were seen crossing the frozen surface of the sea, to gain a milder climate on the American shore. The people within the Arctic zone do not tame the rein-deer, nor yoke it in the sledge; it is not even for them the staff of life; but it affords a favourite object of summer-hunting, gives an agreeable variety to their meals, and yields their warmest and most valuable winter-robes. The fur-skin becomes always richer and more copious in proportion to the intensity of the cold, against which it forms the only defence. In the chase the deer fall easy victims, even to the rude archery of the Esquimaux, being so simple and curious, that if a man merely walks away from them, they follow. Some of these animals, which joined Captain Parry's crews on Melville Island, played round them like lapdogs, and at setting out in the morning used to gambol by rearing on their hind-legs. The musk-ox, the only member of the bovine species which penetrates the Arctic zone, though in smaller numbers, constitutes also a wholesome food. Its unwieldly form is protected from the cold by an immense profusion of hair, which envelops its whole limbs and figure, and also by an interior layer of wool, that appeared to Pennant the finest he had ever seen, and made, he was told, stockings superior to the richest silk. This last, we suspect, is a temporary clothing.

Its uses.

Easy capture.

Musk-ox.

The canine race presents several species which brave the most extreme severity of cold, and remain after every other land-quadruped, except the bear, has taken its flight to the southward. Wolves, in considerable

numbers, continue to seek their prey in the utmost depths of the Polar winter. It seems difficult to discover what food they find at that season; but a regular pack attended the English discovery-ships, watching for whatever offal might be found exposed, and serenading them with nightly howlings. As if by a sort of tacit convention, they did not presume to attack the sailors; but they advanced in the most daring manner to the sides of the vessels, and sometimes even entered the huts of the Esquimaux, whose dogs they esteemed a regular prize, and very speedily devoured them. The natives catch them by traps formed of little sheds of ice, at the entrance of which is a portcullis of the same material, connected in such a manner with the bait within, that when the latter is seized by the animal the suspended portion drops, and the wolf is taken. Their tenacity of life is such, that after apparent death they often revive and occasion danger. The Arctic fox, a small beautiful white animal, with woolly hair like a little shock-dog, occurs in still greater numbers. About a hundred were caught in Captain Parry's second voyage, some of which were half tamed and made pets of; while others, by a harder fate, were dressed for table; and their flesh, somewhat resembling kid, afforded an agreeable relief from the constant use of salted meat.

Wolves.

Their capture.

Fox.

The dog, however, is the most important quadruped of the Arctic world, and the most valuable possession of its people, who have succeeded in taming and rendering it equally useful for draught and for hunting. Those of the Greenlander, the Esquimaux, and the Kamtschadale, are large, and of a somewhat wild aspect. Captain Lyon describes them as resembling in form the shepherd's dog, rising to the height of the Newfoundland, but broad like the mastiff; having short pricked ears, a furry coat, and a bushy tail. In general they are observed to bear a strong resemblance to the wolf, and the opinion is even prevalent that the former exhibit only the latter in a tame state. Parry and

Dog.

CHAP. II.

Dogs and wolves.

Richardson both mention instances in which domestic dogs were seduced away by the attractions of female wolves; yet the avidity with which the wolf devours his supposed brethren does not seem quite consistent with so close an affinity. Nature, with provident care, defends them against the cold, not only by a profusion of long hair, but by a soft downy covering, formed beneath it at the commencement of winter, and shed at the approach of the milder season. The Esquimaux are much reproached for their harsh treatment of these valuable servants; yet, when young, they are used with tenderness, the women often taking them into bed, and feeding them from their own mouths. As soon as they can walk they are yoked to a small sledge; in endeavouring to shake off which encumbrance they learn to draw it. Severe and frequent beatings, however, are necessary to train them for acting as a regular team. But their greatest sufferings respect the want of food; of which, during the season of scarcity, they obtain a portion barely sufficient to maintain life, and not at all to prevent them from falling into a state the most meagre and debilitated. Their hunger is manifested by the nature of the substances with which they sometimes seek to assuage it. Captain Parry saw one which ate a large piece of canvass, a cotton handkerchief laid out to dry, and a piece of a linen shirt. The Esquimaux, we must recollect, are subject to painful scarcities, and the food of the dogs being the same with their own, the animals, on such emergencies, can scarcely expect to be placed on a footing of equality. But this rough usage does not seem incompatible with a certain degree of attachment and commiseration. For example, they refused to sell them to the English, till assured that they would not be killed. They rejoiced greatly to see a house built for them; and at every visit a friendly recognition took place between each dog and his old master. When these animals are yoked in the sledge, a whip of twenty feet long enforces obedience; while

Esquimaux dogs.

Imperfect provisions.

Fondness for them.

peculiar cries indicate the right or left, to turn or to stop. Three dogs can draw a sledge weighing 100 lbs. at the rate of a mile in six minutes, and one leader is said to have transported 196 lbs. the same distance in eight minutes. A full team, however, comprises eight or ten; though seven have been known to draw a loaded sledge at the rate of a mile in four minutes and a half; while nine, employed in conveying stores from the Hecla to the Fury, drew 1611 lbs. in nine minutes. Captain Lyon reports most favourably of the team that he himself formed, which used to carry him from ship to ship, a mile distant, in the deepest darkness and amid clouds of snow-drift, with the most perfect precision, when he could not have found his own way a hundred steps. Their services in hunting are also of great value; they can snuff the seal in his hole, or the deer on the mountains, from a surprising distance. Assembled in packs, they face even the Polar bear, keeping him at bay till their masters come up with spears to the attack.

Sledge drawing.

The air in those dreary regions is, almost as much as the waters, peopled with its appropriate inhabitants, which fill it continually with sound and life. Here, too, the species are nearly all different from those that wing their flight through the temperate skies. They do not shine with the bright hues of the humming-bird, nor breathe the soft notes of the nightingale, nor do they charm the ear with the rich melody of our woodland choirs; but the auk, the petrel, and the gull, clustering in myriads, cause all the rocks and shores of the North to echo with their wild clang. They are almost all rapacious and carnivorous; the vast collections of shell-fish and marine insects with which those seas abound, and the carcasses of the huge animals that are killed, either in conflicts with each other or with man, affording them an inexhaustible supply of nutriment.

Birds.

Auk, petrel and gull.

The fulmar, or petrel (*Procellaria glacialis*), is the close attendant of the whale-ships in every stage of their progress. Termed emphatically the bird of storm,

Petrel.

CHAP. II.

it faces the northern tempest when raving with its utmost fury, and seats itself on the agitated crest of the mountain-wave as calmly as if resting on the surface of an untroubled lake. It follows with one uniform object,—that of snatching and feasting on portions of blubber.

Flocks of Petrels.

As soon as a whale is fastened to the side of the ship, and begins to be cut up, an immense muster takes place, sometimes exceeding a thousand, all stationed in the rear, watching for the fragments which are wafted to leeward. The peculiar chuckling noise by which they express their eager expectation, the voracity with which they seize on the fat, and the huge morsels which they swallow,—the envy shown toward those that have obtained the largest of these delicate morsels, and often

Amusing scenes.

the violent measures taken to wrest it from them,—afford to the sailors a variety of amusing scenes. The surface of the sea is occasionally so completely covered with them, that a stone cannot be thrown without one being struck. When an alarm is given, innumerable wings are instantly in movement, and the birds, striking their feet against the water to aid their flight, cause a loud and thundering plash.

Arctic gull.

The petrel, however, does not enjoy alone this delicious ocean-festival. It is sought with equal avidity by the various species of the *Larus* or gull,—the Arctic gull, the kittiwake, and the snow-bird (*Larus eburneus*), which last excites admiration by the pure and beautiful white of its plumage; but the elegance of its taste does not correspond to that of its appearance, fat blubber being its choicest luxury, while it utters a loud and disagreeable scream. All these ravening tribes of the

Blue gull.

northern sky, however, have a terrible rival in the blue gull (*Larus glaucus*), which, while it equals them in rapacity, surpasses them all in strength. In consideration of this, the Dutch have invested him with the title of *burgomaster*; but that sage magistrate uses, we trust, his power in a very different manner from his winged representative, who employs it solely in wresting from the weaker species whatever he sees them possess, and

esteems desirable. He is usually hovering high in the air, or seated on the loftiest icy pinnacles, whence, having fixed his eye on a dainty morsel, he darts down on the possessor, which, whether fulmar, snow-bird, or kittiwake, must instantly resign the coveted prize. Happily for these races the burgomaster class is very small in number, compared to the multitudes over whom he tyrannizes.

Preying on weaker birds

The genus *Anas*, comprehending the swan, the goose, and the duck, large, useful, and often beautiful fowls, traverse in vast flights all the northern seas and inlets. Like the rest of the *Anseres*, they have all webbed feet, consisting of branching toes connected by a membrane, which enable them to move with equal facility on the water as on land. The swan, with its stately plumage, frequents chiefly the inland seas and lakes, of which it has been called the peaceful monarch. The goose, a less elegant but more valuable bird, migrates in vast numbers every spring to breed on the Arctic shores and islands, and affords a valuable supply of food to all the northern settlements. The Hudson's Bay Company salt three or four thousand annually for winter. The Indians celebrate the month of their arrival under the title of the goose-moon. Migration during the rigorous season, resorted to even by quadrupeds, becomes the still more natural resource of the feathered creation. In September the flocks of geese, winging their way to the southward, supplied a warning to Captain Franklin of the winter that was closing in upon him.

Swan, goose, &c.

Migrations of geese.

The duck reaches a still higher latitude than the goose, and endures still severer cold. Great flocks of that species called the eider arrive in spring on the most northern shores of Greenland. All the birds that fly over the frozen seas are provided by nature with a rich and ample plumage, and a lining of soft down beneath; and the people of those countries find their skins, with the feathers inside, to be one of their most comfortable articles of clothing. But the down of all the other species is surpassed in fineness by that of the

Duck.

CHAP. II.

Duck down.

duck now named, the delicious softness of which fits it for the couch of kings. A pound of eider-down, according to Sir Charles Giesecke, is usually sold for a pound sterling. The best is that which the birds pluck from their breast to furnish the interior of their nest. The Greenlander, watching his time, removes this precious lining as soon as it is completed, whereupon the poor animals form a second, destined to share the same fate.

Terns.

Among Arctic birds are included the terns, which on the American coast are so very numerous, that an island has been named from the immense flocks with which it is annually filled. They produce the most delicate eggs of any water-fowl. We may add the *Colymbus* (guillemot), whose skin affords a peculiarly comfortable clothing,—the *Tringa* (sandpiper),—the *Charadrius* (plover),—the *Tetrao* (grouse and ptarmigan), of which a species, much valued on account of the delicacy of its flesh, occupies the interior of Greenland. All ptarmigans change their colour, from mottled gray or brown in summer to pure white during the winter months. According to De Reste, the dark summer-covering is shed at the end of autumn, and a new plumage shoots out, which is white, till darkened by the warmth of the following spring,—or, to speak more accurately, a partial moult takes place towards the close of the year, during which all the coloured feathers are thrown out, and their places supplied by white ones; while in spring most of these last are again shed, to make room for others adorned by the richer and more varied hues of summer. Captain Parry saw this change go on so rapidly among the grouse on Melville Island as to be perceptible from day to day.

Ptarmigans

Vegetable life.

The *vegetable world* does not, in this dark and outer boundary of the earth, possess such an important character as the animal. Nature, without departing wholly from her ordinary laws, could not clothe with verdure a soil which during nine months of the year is frozen as hard as rock, and covered with snow many feet deep.

The plants of more genial climates, indeed, when inserted at the commencement of the short bright summer, spring up and wear for some time a promising appearance; but they are all nipt by the surly winter. Still, in the northern regions, especially when approaching the Arctic zone, she does employ resources similar to those by which animal life is preserved. The fir, the pine, and other trees peculiar to the climate, on being pierced, distil, not the balmy and fragrant gums of Arabia and India, but rich, thick, coarse juices, whereby their internal heat is maintained, and which, in the shape of pitch, tar, and turpentine, serve many valuable purposes. Through the cherishing influences of these juices, the lakes of North America are bordered with tall dark forests, which afford to the agricultural countries an inexhaustible supply of useful timber. Even their gloomy foliage, while the forests of the south are every autumn strewing the ground with their faded leaves, braves through the winter all the fury of the northern tempest. Before reaching, however, the inclement sky of the Arctic regions, this magnificent growth decays. Trees gradually dwindle into meagre and stunted shrubs. Beyond the Polar circle, these monarchs of the wood, if they appear at all, rise only to the height of a few feet, throwing out lateral branches. On Melville Peninsula, dwarf-willow and the *Andromeda tetragona* afford to the Esquimaux their only material for arms and utensils. Considerable quantities of drift-timber are, no doubt, frequently found on those remote shores, supposed to have floated originally from the mouths of rivers, on the Asiatic as well as the American continent.

Exotic plants.

Fir and pine trees.

Foliage.

Dwarf willow.

The species which abound most in those dreary climates belong to the tribes of mosses and lichens,— the *Cryptogamia* of Linnæus, the *Acotyledones* of Jussieu. The meagre vegetation with which the surface of the earth is covered, thus appears rather as if it were an exudation from the rocks than the produce of the soil; yet the plants now specified are not only produced in abundance, but possess a nutritious and salutary quality

Mosses and lichens.

CHAP. II.

Lichen food.

not displayed in more fortunate regions. One species of lichen (*L. rangiferinus*) forms, as it were, the main staff of life to the Laplander; it supports the rein-deer, and the rein-deer supports him. The lichen of Iceland, again, whether boiled in soup or converted into bread, is to the natives a principal part of their subsistence. Farther north, where the depth of the snow and the continuance of frost drive the inhabitants to the shore and to the use of animal food, these vegetables still afford nourishment to the various quadrupeds which they set apart for this purpose. It is also with a peculiar species of moss that they trim their lamps. The *fungus* or mushroom, that is seen to vegetate without the aid of a proper root, and the *filices* or ferns, which consist only of one spreading leaf, the middle rib of which forms all their stalk, find the means of existence even in Greenland.

Mushroom.

Marine botany.

The order *Algæ*, and especially the tribe of *Fuci*, comprehending nearly all the variety of marine botany, grow in vast abundance on the northern shores. These rude plants, which have little or no distinction of stem, root, or leaves, and whose fructification is often included within the substance of the frond, cover the Greenland coast with meadows under the level of the sea. The *Confervæ*, too, another division of the same order, with their numerous filaments, spring up in great abundance.

Summer flowers.

A few plants, not belonging to this imperfect order of vegetation, embellish, during the short summer, those northern fields. Indeed, at this season, under the bright influence of the sun, some of the most beautiful among the floral tribes expand their petals. The ranunculus and anemone display their rich and varied tints; several species of saxifrage put forth their flowers; and the yellow poppy has even a gaudy appearance,—so that the genus *Papaver*, which enriches the plains of Hindostan, is among the last to expire under the snows of the Pole. The nobler fruits do not ripen under this ungenial sky; yet shrubs producing delicious berries appear on the borders at least of the Arctic zone in matchless profu-

sion. The northern Indians consider the fruit of a bush called the *Aronia ovalis* as the most agreeable food; besides which they have the strawberry, raspberry, red whortleberry, and various others. Several of these are covered beneath the first snows of winter, which are supposed to mellow them, and, when disclosed by the return of spring, the berries are seen still hanging on the branches, while the buds of the others are bursting,—the whole producing a delightful impression, unknown to those who have not witnessed the desolation that immediately preceded.

Fruits.

Those climates enjoy, besides, a precious boon in the plants which act as an antidote to scurvy, and which defy the severest cold of the Arctic zone. The *Cochlearia*, a thick-tufted juicy plant of extreme fecundity, is emphatically called *scurvy-grass;* and the different species of sorrel, especially the *Rumex digynus*, were found by Captain Parry flourishing under the snow at the very farthest limit of vegetation.

Antiscorbutic plants.

The extraordinary phenomenon of *red-snow*, observed by Captain Ross and other Arctic voyagers, naturally excited the greatest interest both at home and abroad. This singular tint in a substance, with which we never fail to associate an idea of the purest and most radiant whiteness, has been ascertained to result from an assemblage of very minute bodies, belonging to the class of cryptogamic plants and the natural order called *Algæ*. They form the species named *Protococcus Nivalis* by Agardh, which is synonymous with the *Uredo Nivalis* of Mr Bauer. This production seems by no means peculiar to the Arctic mountains, but occurs on limestone rocks in the island of Lismore in Scotland, as well as among the Alps and other countries of Europe. Saussure observed it so long ago as the year 1760 on Mount Breven in Switzerland, and so frequently after that period, that he expresses his surprise at its having escaped the notice of Scheuchzer and other learned travellers. Ramond, whose observations so beautifully combine the precision of science with the perception of the picturesque, found

Red-snow.

Origin and nature.

CHAP. II.

Red snow in the Pyrenees.

red snow in the Pyrenees, as did Sommerfeldt, the botanist, on the hills of Norway. In the year 1818 vast masses of the same substance overspread both the Apennines and the Italian Alps; and it is recorded, that ten years prior to that period the vicinity of Belluno and Feltri was covered to the depth of twenty centimètres with rose-coloured snow.

Observations by Captain Ross.

According to Captain Ross, the ridges on which he observed this phenomenon are about 600 feet high, and extend eight miles in length. The depth to which the colour penetrates has been variously stated by different observers. Some found that it descended many feet beneath the surface, while others never saw it spread beyond one or two inches. There is no reason to suppose that the colouring matter itself, as well as the snow, is a meteorological product, although Humboldt certainly mentions a shower of red hail which fell at Paramo de Guanacos, in South America. Moisture is no doubt essential to the production of this plant, as it is to that of all the other *Algæ;* but, when once formed, it seems to possess the power of continued vegetation, even on rocks and stones, with only an occasional supply of fluid.

Rapid propagation.

The propagation of minute vegetable forms, like that of animalcules, is effected, under favourable circumstances, with a rapidity of development truly astonishing; and the most probable conjecture seems to be, that snow is not the natural situation of the *Protococcus Nivalis*, but merely that, from its great tenacity of life, it can preserve its vitality on so chilly and ungenial a surface. If such be the case, it is easy to suppose how a wide expanse may be covered with this red suffusion, during the occasional flowing of the snowy waters. When once established, its particles become more numerous than the sands of the ocean; and, increasing in density from year to year, it presents at last to the astonished navigator a sight more surprising in its reality than any of the fabled wonders of an Arabian tale.

Singular coincidence.

A singular coincidence has been observed by botanists to exist between a white ground and a red flower. Thus

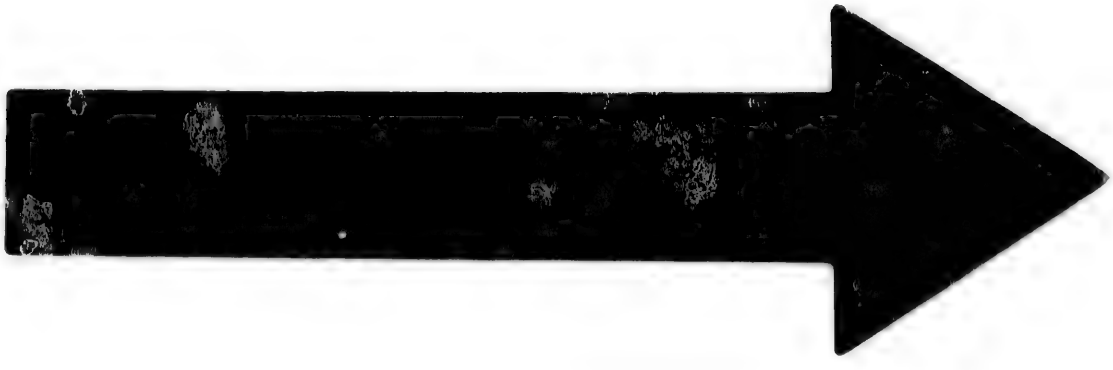
Colour of the snow plant.

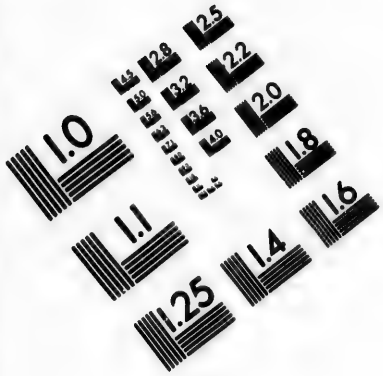
the rich and brilliant variety of *Anthyllis vulnaria* is only found on a chalky surface; and many of the higher orders of flowering plants show a decided tendency to produce red-coloured petals when they happen to spring up on white limestone. "How much more forcibly, then," says Agardh, "must this law operate upon plants like the *Algæ*, in which colour is an essential part." That excess of light produces the peculiar or at least prevailing colour of the snow-plant, may be said to be demonstrated by this singular fact, that the red colour gradually changes to green as it occurs more or less secluded from the action of light among the fissures of rocks, or beneath the hollows or under-surfaces of stones. This being the case, it will appear the less incomprehensible that the same plant which is produced amid the snows of the Arctic regions or the highly elevated Alps of more southern countries, should be occasionally detected, even during the heat of summer, covering the brilliant white limestone of the plains. In the last-named locality it was discovered by the Baron Wrangel in the province of Nerike, and named by him *Lepraria kermesina;* and the two supposed species have been since ascertained to be one and the same.

Effects of returning warmth.

In concluding our notice of this singular substance, we may observe, that when the warmth of the returning sun has partially dissolved the surface of the snow, and thus contributed to the formation and development of these microscopical plants, the vivifying power of the solar light, aided by some peculiar and as yet unknown property belonging to the natural whiteness of the snow itself, is highly influential in the production of the beautiful colour by which they are distinguished.*

* Mr Scoresby conjectured that the red colour of the Arctic snow derived its origin from innumerable multitudes of very minute creatures belonging to the order *Radiata*. He had frequently observed the ice to be tinged with an orange colour, obviously resulting from an assemblage of small transparent animals of about the size of a pin's head, resembling the *Beroe globulosa* of Lamarck. Other observers have thought themselves authorized to trace the red colour to the dung of the





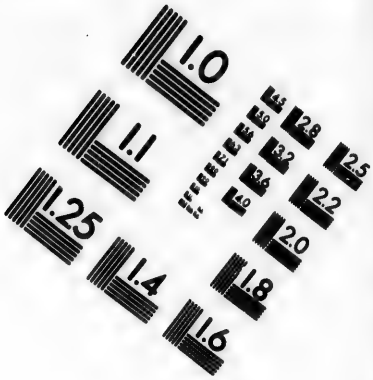
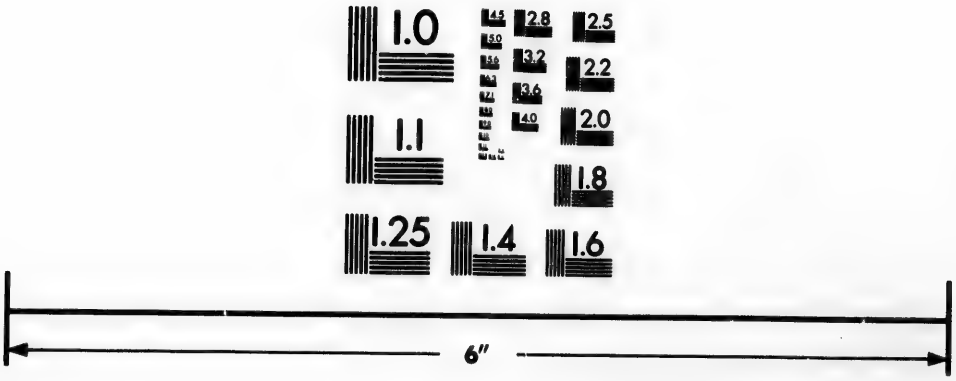
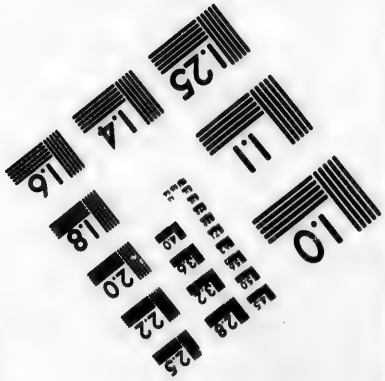


IMAGE EVALUATION TEST TARGET (MT-3)





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CHAP II. little auk (*Uria alle*), which abounds on many of the barren shores of the North. But neither of these supposed causes could produce the phenomenon alluded to, as observed among the central Alps of Europe, where marine radiata and little auks are alike unknown.

CHAPTER III.

Ancient Voyages to the North.

Voyage of Pytheas—Norwegian Expeditions; Ohthere—Colonization of Iceland—The Zeni—Quirini.

CHAP. III.

Ancient voyages.

THE voyages to the North, undertaken prior to the great era of maritime enterprise and the invention of the compass, were few in number, and scarcely extended into those circumpolar regions which form the special subject of the present volume. It will be enough, therefore, to take a rapid sketch of the steps by which discovery proceeded towards those remote and almost inaccessible quarters.

Earliest maritime shores.

The Mediterranean, the shores of which constituted the first civilized portion of the West, was the quarter where European navigation originated. As Tyre, situated in the depth of that sea, was the earliest seat of commerce, Carthage, the daughter of Tyre, was doubtless the first state which undertook any extensive discoveries upon the ocean. These, however, were shrouded in deep mystery, prompted by the jealous and monopolizing temper of this people, once so powerful and opulent. The classic writers give only some slight and detached notices of the voyage of Himilco, who appears to have sailed along the exterior coasts of Spain and France, and to have reached the southern extremity of Britain. This, it is probable, was only the first of a series of voyages carried on with the view of procuring tin,—a metal rare and highly valued in those days. The Cassiterides, or Tin-islands, which appear to be Cornwall

Himilco.

CHAP. III.

and the Scilly Isles combined together, were celebrated among the primitive authors of Europe.

Pytheas.

The most distinguished of the Greek navigators who penetrated into the North was Pytheas, a citizen of Marseilles, a Greek colony, which, favoured by its situation, had become the chief emporium of the commerce of Britain, already esteemed of some importance. He seems to have been the first who, inspired by motives of intelligent curiosity, endeavoured to reach the British coast, and the remotest extremities of the sea by which it is washed. Our knowledge of this voyage is indeed imperfect, being almost entirely due to Strabo, who, while he relates it, derides the whole as a palpable forgery; yet the very particulars on which he founds this charge go far to establish the fact he questions. Pytheas appears to have passed the Straits, and sailed along the western coasts of France and Spain, which, from previous misconception, he confounds together. Thence he seems to have directed his course through the English Channel, and along the eastern coasts of Britain, till he reached the northern parts of the island. Not content with this achievement, he continued to sail onwards into the depths of ocean, till in six days he arrived at Thule, an island where it appeared to him that perpetual light reigned at midsummer throughout the night as well as the day. Immediately beyond, his progress was arrested by a barrier of a peculiar nature—by something which was neither earth, air, nor sky, but a compound of all the three; forming a thick viscid substance, through which it was impossible to penetrate. These statements have afforded much advantage to sceptical readers; yet the summer days of Shetland are really very long, and the thick and gloomy mists, with which the Northern Sea is often loaded, might make a peculiar impression on the mind of a man who had ventured into this unknown ocean so far beyond the limit of former navigation: they might make him prone to believe that he had arrived at the farthest boundaries of

Strabo.

Thule.

Northern mists.

nature. It seems difficult, however, to suppose, with Bougainville, that he proceeded as far as Iceland; though there is little doubt that he entered the Baltic, and also brought home a correct account of its shores, then known to the people on the Mediterranean almost solely by the qualities of the amber which was thence imported. Baltic.

The enterprise of Pytheas, though apparently quite authentic, did not lead to any change in the course of the Massylian trade. It was probably found both cheaper and more convenient to transport the productions of Britain through Gaul, than to convey them by means of such a lengthened and perilous voyage. The only other additions to ancient knowledge respecting the northern seas were made by the Romans, who, in order to conquer, were obliged to explore the earth. Agricola, before undertaking the campaign which was to reduce Scotland into a province, sent fleets to explore its most northern shores and bays. His countrymen, however, do not appear to have sent in that direction, nor perhaps in any other, naval expeditions having discovery alone for their object. Their delineation of Caledonia itself is excessively rude; and though they had traced the shores of Europe eastward as far as Russia, the great peninsula of Scandinavia appeared to them only as a cluster of islands. Results of the voyage. Agricola.

In the decline of the Roman empire, that country, formerly so little regarded, became the seat of a most formidable maritime power. Norway, under the terrible dominion of Harold the Fairhaired, Denmark, under Gorm and Canute, sent forth fleets which pillaged all the coasts of Europe, and reduced many of them to subjection. Their movements, however, were *from* the North, not *to* the North; and their objects were not science, but ravage and conquest. The Runic tribes, indeed, were not without some tincture of letters and poetry; though their *sagas* or poetical chronicles celebrated only the exploits of their mighty sea-kings and rovers, not any undertaking connected with commerce and the arts of peace. Yet a communication with these adventurers Scandinavia.

CHAP. III.

Alfred.

enabled Alfred, that illustrious monarch, to collect information respecting those extremities of the earth which had remained unknown to the Greeks and Romans. Ohthere, a chief who had come from the upper tracts of Norway, afforded some intelligence respecting a voyage performed by himself along the Arctic shores of Europe.

Ohthere.

This traveller was considered a rich man in his own country, being owner of twenty oxen, twenty sheep, and six hundred tame rein-deer. Fired by a spirit of liberal research, he put to sea in order to discover the regions that lay northward of the high latitude in which his domain was situated. He sailed six days in that direction, at the end of which he appears to have reached the North Cape, the farthest point of Europe; he then turned three days towards the east, and afterwards five days to the south. All this while the land on his right was desolate, traversed only by a few wandering shepherds and hunters of Finnish race. Then, however, he reached a large river, the opposite side of which was somewhat densely inhabited by the Biarmians, or people of Northern Russia, who showed such a hostile disposition as obliged him to return. The fishery of the horse-whale (walrus) was found to be carried on here with so great advantage, that many individuals were afterwards induced to repair thither. Forster delineates the course of Ohthere as extending to the interior of the White Sea: but we do not think the period of eight days from the North Cape could have carried him farther than the river Kola, which agrees also with the supposition of his having been arrested on the frontier of Russian Lapland.

Voyage to the North cape.

Voyages of the North men.

In pursuing their favourite objects of conquest and plunder, the Northmen always bent their sails towards the south. To quit their bleak regions in search of others still more bleak, would have been wholly foreign to their views; yet, as the sea was covered with their ships, chance and tempest sometimes drove them in an opposite direction. In 861, Nadodd, during a piratical

excursion, unexpectedly discovered Iceland; and though this country had little to tempt a nation of freebooters, it so chanced that there existed materials for its colonization. Harold, in making himself master of all Norway, had deprived of their rights and domains numerous petty chieftains, and thereby created a large body of malecontents. But he was willing to grant, and they to accept, a permanent refuge in this frozen clime; and, accordingly, successive bands of emigrants proceeded thither, where they were organized into a free and independent community. They even crossed to the opposite coast of Greenland, and formed settlements, which for some time were tolerably flourishing, though they have since either perished or lost all communication with the parent state. During the eleventh century, however, chance or enterprise led them southward to another coast, which they called Vinland, and which has been very generally believed to be America, though, after a careful examination of the authorities on which this opinion rests, we are satisfied that the new country was merely a more southern point of Greenland. The limits of the present work, however, will not admit any detailed account of these settlements.

Discovery of Iceland.

Colonization

Vinland.

The republican cities of Italy, during the middle ages, revived the fainting spirit of commerce and navigation, which they raised to a degree of prosperity, equal, probably, to that attained by Tyre and Carthage during the height of their ancient glory. Their trade, however, lay chiefly within the Mediterranean, especially its eastern border, whither were brought overland, or by the Red Sea, the commodities of India. Few were disposed to quit this bright and golden track to face the tempests of the northern ocean; yet were there not wanting some adventurous spirits who incurred all the hazards of penetrating into its remote and dangerous waters.

Medieval voyagers.

Nicolo Zeno, a noble merchant of Venice, undertook, in 1380, a voyage to Flanders, during which a tempest drove him upon a coast that he calls Friesland. The

Nicolo Zeno.

CHAP. III.

position of this unknown shore has been a subject of controversy; and some have even had recourse to the hypothesis of its having been since swallowed up by the ocean. When, however, we find that Friesland was in fact a cluster of islands, to which are applied the names, Talas, Broas, Bres, Iscant, easily converted into Zeal, Brassa, Unst, we may conclude with Forster that it was probably one of the Shetland Isles. Being cast ashore in a state completely destitute, he was received with great kindness by the Prince Zichmni; who, finding him eminently skilled in naval affairs, reposed in him the highest confidence, and placed under his command various expeditions. So pleased was the Venetian with the favour of this northern potentate, that he invited his brother Antonio to join him. The only voyage, however, which seems to have carried him far to the north, was one to Greenland, and he gives a somewhat romantic account of a religious establishment already formed in that country. The convent was built on the side of a hill, whence burst a copious spring, whose boiling waters enabled the monks to vanquish all the evils of the climate. When spread on the frozen soil, it contributed to the production of the most useful herbs and culinary plants; and when introduced into the houses, it served for warming the apartments and cooking the victuals. They were likewise supplied from the country with abundance of fish, rein-deer, and wild-fowl; and vessels from Norway brought to them the luxuries of life. Zeno performed other voyages in a different direction, which have even been supposed to reach as far as America: but we incline to think that the notices which have suggested this conclusion are partly misunderstood and partly interpolated.*

Friesland.

Prince. Zichmni.

Voyage to Greenland.

Supposed voyage to America.

Quirini, another Italian nobleman, in 1431, engaged in a similar enterprise, and was likewise driven by a tempest on the coast of Norway. The crew arrived in

* A recent writer views the whole narrative as a complete forgery,—a conclusion to which we are not willing to accede.

the most miserable plight, having lost the ship, and been obliged to take to their boats, after the greater part of them had perished by hunger, cold, and thirst. They were thrown first on a small uninhabited island, where, having erected two tents, and found a large fish, they contrived to support life. After some days, a fisherman and two boys coming in a boat to the island, were at first terrified at the sight of the strangers; but, by soothing language and importunity, were at length prevailed upon to take with them two of the sailors,—Gerard of Lyons and Cola of Otranto. They rowed to a village on the neighbouring island of Rost, where they met the kindest reception; and, as it chanced to be Sunday, the priests exhorted the congregation to afford all the assistance in their power to these unfortunate strangers. Six boats were fitted out, the appearance of which filled Quirini with joy; and his satisfaction was still farther increased by receiving a supply of bread and beer, as well as a cordial invitation to proceed with his deliverers to Rost. He and his people were treated with uninterrupted kindness during a stay of three months, in which time they completely recovered from all their distress and fatigue. The natives of this little island, about 120 in number, subsisted on salt fish, which they carried to the market of Bergen, where purchasers arrived from Germany and other countries; also on sea-fowl, which in vast flocks covered all the surrounding rocks, and even built on the sides of the houses. Many of these birds were so tame that, when the natives walked up to their nests, they were wont to step off, allow two or three eggs to be taken, and then resume their seat. The people were most strict in their attention to religious duties, and carried their resignation to the will of Providence so very far that they rejoiced, and sometimes even held a festival, at the death of near relations. The Italians, accustomed to the feelings of southern jealousy, were extremely surprised to see all the members of a family sleeping together in one apartment, which they themselves were permitted to share

Native fishermen.

Hospitality.

Native provisions.

Domestic habits.

CHAP. III.

Simplicity of manners.

without the remotest feeling of impropriety. In summer, both sexes walked naked to the nearest pool, and bathed promiscuously, all in perfect innocence, and without awakening any suspicion,—a practice, indeed, which pretty generally prevails in the northern countries of Europe at the present day.

The summer having arrived, Quirini took occasion to go with the annual ship to Drontheim, and, travelling thence by land to Sweden, he found a vessel bound for Rostock, in which he finally returned to Italy by way of England.

CHAPTER IV.

Voyages in Search of a North-east Passage.

Rise of Maritime Enterprise in England—Plan of a North-east Passage to India—Expedition of Sir Hugh Willoughby; its Issue—Chancelor reaches the White Sea; Journey to Moscow—Voyage of Burroughs—Of Pet and Jackman—Dutch Expeditions—Barentz's First, Second, and Third Voyages; His Death—Hudson—Wood—Litke.

CHAP. IV

Great maritime undertaking.

THE latter part of the fifteenth century may be fixed upon as that period in the history of the world when maritime discovery was prosecuted on the greatest scale, and with the most splendid results. Travellers and navigators of the present day have displayed an enterprise which cannot be exceeded; but there remained for their efforts only the distant boundaries of ocean, or the interior of barbarous continents. On the contrary, vast kingdoms, new worlds, regions teeming with unbounded wealth, rewarded the daring career of Gama and Columbus. A new direction was given to human ambition and industry; and the discovery of distant regions became not only a commercial speculation with individuals, but one of the grandest objects of national policy.

English adventures.

England had always shown herself ready to embark in every scheme of adventure and utility; yet she was not altogether prepared for these extensive undertakings. The nations of southern Europe were then nearly a century in advance of those ruder states which lay behind the Alps and the Pyrenees. Venice, Genoa, Seville, Lisbon, and not London or Amsterdam, were

CHAP. IV.

Early schools of navigation.

the great schools of commerce and navigation. The habits and ideas of the feudal system, its proud indolence and contempt of mechanical pursuits, were only in the course of being superseded; and the mercantile interest possessed as yet only a small share of that importance to which it has since attained.

Henry VII.

Henry VII., amid these unfavourable circumstances, and with nothing of the heroic or adventurous in his composition, possessed qualities which enabled him to appreciate the advantages of maritime discovery. Every thing which promised to fill his coffers was congenial to his taste; and for this reason he showed himself ready to meet the views of Columbus with greater zeal than any other monarch of the age. That great navigator, after vain solicitation at the courts of Spain and Portugal, sent his brother Bartholomew to make propositions to the English sovereign, which were very favourably listened to; but before his messenger returned to Castile, the Genoese captain, under the auspices of Isabella, was already crossing the Atlantic. It was afterwards with the countenance of Henry, though not at his expense, that John Cabot, in 1497, made that important voyage in which he discovered Newfoundland,—an island which, though not fitted for culture, has become the seat of one of the greatest fisheries in the world. He was also the first European who came into contact with any part of the American continent. The same prince, in 1498, furnished to him the means of fitting out another expedition, which appears to have been conducted by his son Sebastian. He subsequently granted to Richard Warde, Thomas Ashehurst, and John Thomas, merchants of Bristol, in conjunction with three natives of Portugal, letters-patent, to undertake the discovery of lands and regions unknown; but the result of their expedition is not recorded.

John Cabot.

Bristol Company.

Notwithstanding these proceedings, England had not yet thoroughly imbibed the true spirit of maritime enterprise. Kindled at a foreign shrine, the flame, when deprived of external support, gradually lan-

guished ; and it became nearly extinct during the long reign of Henry VIII. Considering the character of this despot, full of bustle, needy of money, and not devoid of intelligence, he might have been supposed rather prompt to embark in such undertakings ; but, involved in numerous disputes, domestic and theological, and studying, though with little skill, to hold the balance between the two great continental rivals, Charles and Francis, he was insensible to the glory and advantages to be derived from naval expeditions.* Sebastian Cabot, in order to obtain employment, was obliged to quit England and repair to Spain, where he was received with much favour, and spent the greater part of his life, either in attempts at discovery, or in a quiet residence at Seville, where he was consulted and revered as a nautical oracle.

Henry VIII

Sebastian Cabot.

After a long slumber the maritime genius of England

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* This passage has drawn forth the indignation of a late author (Memoir of Sebastian Cabot, Lond. 1831), who represents the writer of this department of the work, in conjunction with his illustrious predecessors, Robertson and Forster, as wholly disregarding "the evidence which strikingly evinces the earnest and continued exertions of Henry VIII. in reference to this project" (p. 281). Yet his utmost research has only proved that this prince, in the course of a reign of thirty-eight years, while all Europe was filled with the enthusiasm of maritime discovery, fitted out *two* expeditions, both seemingly in compliance with very urgent representations. Mr Thorne, the chief English promoter of naval discovery, entirely concurs with us when he says to Henry, in a letter written during the eighteenth year of his reign, "Perceiving that your Grace may at your pleasure, to your greater glory, by a godly meane, with little cost, perill, or labour to your Grace or any of your subjects, amplifie and inrich this your sayd realme, I know it is my bounden duety to manifest *this secret* unto your Grace, *which hitherto, as I suppose, hath beene hid.*"—Hakluyt, i. 213. The single expedition fitted out in the course of the succeeding twenty years could not materially alter the character of Henry as a promoter of discovery. A consideration of the simple fact, that Sebastian Cabot, during nearly the whole reign of this monarch, was obliged to seek patronage in a foreign country, is surely decisive as to his pretended zeal in the cause of discovery. There does not therefore appear the slightest ground for any alteration in the passage as it stands in the text.

Expeditions under Henry VIII.

CHAP. IV.

Edward VI

was suddenly roused; bursting forth under a young prince of high hope and promise. In 1553, the sixth year of the reign of Edward VI., the merchants of London, among whom are said to have been "men of great wisdom and gravity," felt an unwonted and extreme ardour in the cause of discovery. There chanced at that critical moment to be in their city no less a person than Sebastian Cabot, with whom they entered into deep consultation, and with his assistance formed the general plan of a voyage, having in view to reach, by way of the north and north-east, the celebrated regions of India and Cathay. The obstacles to such an undertaking could not yet be fully appreciated; no just idea having been formed of the immense breadth of Asia, its extension towards the north, and the enormous masses of ice with which its shores are encumbered.

Cabot.

Royal interest.

The youthful monarch, whether he had any influence in inspiring this general ardour, or whether he caught the flame from his people, showed the most eager interest in the cause. He had already named Sebastian grand pilot of England, with a salary, considerable in that age, of £166. It was not by royal munificence, however, that the funds were supplied for prosecuting this arduous enterprise. An association, or senate as it is called, was formed, who judged it most advisable to divide the concern into shares of £25, by which means the sum of six thousand pounds was easily raised, and employed in the construction and equipment of three vessels fitted for northern navigation. The preparations, with a due regard to the formidable character and length of the voyage, were made on a scale of which there had been no previous example. Cabot says, "The like was never in any realm seen, used, or known." The timbers were made of extraordinary strength, by the best shipwrights; the keel was covered with thin sheets of lead, —a contrivance then practised for the first time,—and provisions for eighteen months were put on board. The grand pilot, though unable, probably from his age, to

Association formed.

Scale of preparation.

accompany the expedition, drew out a series of instructions, in which the whole conduct to be observed by the officers and crew is minutely laid down. He enjoins strict attention to morals; that morning and evening prayers be read on board each ship, either by the chaplain or master; and that there be no "ribaldry or ungodly talk, dicing, carding, tabling, nor other devilish games." He prohibits all acts tending to the breach of discipline, "conspiracies, part-takings, factions, false tales, which be the very seeds and fruits of contention." Naval subordination being in that age only imperfectly established, and the tendency to mutiny very strong, these exhortations were most seasonable. All questions respecting the steering of the ship were to be decided by a council of twelve, the captain having only a double vote. Persons skilled in writing were, in each vessel, to keep a daily record of the course of navigation, the celestial observations, the aspect of the lands along which they sailed, with every other interesting occurrence. The different masters were to meet weekly, compare these records, and enter the result in a common ledger. Directions were even given for adjusting weekly accounts, keeping the cook-room and other parts of the ship clean, and preventing any liquor from being spilled upon them. The natives of the countries which they visited were "to be considered advisedly, and treated with gentleness and courtesy, without any disdain, laughing, or contempt." Particular endeavours were to be made by fair means to allure some one on board, where he was to be well clothed and treated, so as to attract others; but we cannot so much applaud the hint, that "if he be made drunk with your wine or beer, you shall know the secrets of his heart." The mariners are exhorted, however, to use the utmost circumspection in their dealings with these strangers, and, if invited to dine with any lord or ruler, to go well armed, and in a posture of defence. The liveries furnished to the sailors were to be carefully kept by the mercantile agents, and to be worn only when their

Code of instructions.

Council of twelve.

Conduct towards foreigners

CHAP. IV.

captain considered it an object to show them "in good array for the advancement and honour of the voyage." He warns the mariners not to be too much alarmed when they saw the natives dressed in lions' and bears' skins, with long bows and arrows, as this formidable appearance was often assumed merely to inspire terror. However, he seems to suggest a still more chimerical fear, when he tells them that there are persons armed with bows, who swim naked, in various seas, havens, and rivers, "desirous of the bodies of men, which they covet for meat," and against whom diligent watch must be kept night and day. We know not whether some confused rumour of the shark and alligator had an influence in suggesting this strange precaution.

Naval liveries.

Sir Hugh Willoughby.

It now became necessary to elect a suitable commander, and many offers were made both by persons qualified and unqualified. The choice for the supreme direction fell on Sir Hugh Willoughby. His recommendations, as mentioned by Adams, were high birth, tall and handsome person, valiant conduct and skill in war,—merits probably enhanced by admiration of the heroism which impelled him to engage in this new and daring career. No mention being made of nautical experience, it may be suspected that, amid so many brilliant qualities, this most essential requisite was not duly taken into account. The charge of the next vessel was confided to Richard Chancelor, an *élève* of Henry Sidney, father of Sir Philip, and who first gave lustre to that great name. Sidney stood high in the favour of the king, and was animated with the most ardent zeal for the promotion of the voyage. Chancelor is specially commended for "the many good parts of wit in him," tending to inspire the most sanguine hopes of his success.

Inexperience.

Richard Chancelor.

Royal letter.

The preparations being completed, Edward drew up a letter addressed to all "kings, princes, rulers, judges, and governors of the earth;" which, if composed by himself, certainly reflects very considerable credit upon his spirit and judgment. He observes to these unknown

potentates, that "the great and Almighty God hath given unto mankind, above all other living creatures, such a heart and desire that every man desireth to join friendship with other, to love and to be loved, also to give and receive mutual benefits." He represents, therefore, the duty of showing kindness to strangers, and especially to "merchants, who wander about the world, search both the land and the sea, to carry such good and profitable things as are found in their countries to remote regions and kingdoms." With this view, it is stated that a valiant knight, Sir Hugh Willoughby, and other trusty and faithful servants, had departed from England. "We therefore desire you, kings and princes, and all other to whom there is any power on earth, to permit unto these our servants free passage by your regions and dominions, for they shall not touch any thing of yours unwilling unto you." If such kindness were shown, he concludes, "We promise, by the God of all things that are contained in heaven, earth, and the sea, and by the life and tranquillity of our kingdoms, that we will with like humanity accept your servants, if at any time they shall come to our kingdoms."

Objects of the voyage.

It was judged inexpedient to delay the sailing of the vessels beyond the 10th of May, lest they should be overtaken by winter in the northern latitudes. All the members of the expedition took a solemn and tender leave of their relations, kindred, and "friends dearer than kindred," and were at their station on the appointed day. Early in the morning they dropped down from Ratcliffe to Greenwich, where the court, and, as it were, the nation, were assembled to witness their departure. The king himself was confined by illness, but the principal courtiers stood at the palace-windows, the rest of the household mounted the towers, while the people in crowds lined the shore. The ships fired their guns, causing the hills and valleys to resound; and "the mariners shouted in such sort that the sky rung with the noise thereof. In short, it was a very

Time of sailing.

Departure.

CHAP. IV.

triumph." The thought of the distant and unknown seas, into which they were so perilously plunging, was either forgotten in this moment of exultation, or served only to heighten its enthusiasm.

Number of vessels.

The expedition, which consisted of three vessels, after stopping a few days at Blackwall, sailed down to Gravesend, and thence to the coast of Essex, where contrary winds unfortunately detained them till the 23d. Then, with a favouring gale, they quitted England and shaped their course into the open expanse of the German Sea; the sailors fixing their eyes on their native land as it gradually receded, and many, unaccustomed to these distant voyages, dropped a few natural tears at the thought that they were seeing it perhaps for the last time.

Contrary winds.

Sir Hugh was desirous of touching at the coast of Scotland; but this was rendered impossible by contrary winds, which obliged him also to make frequent changes of course, "traversing and tracing the seas." On the 14th July he found himself involved in that labyrinth of isles which stud the coast of Norway between the 66th and 68th degrees of latitude. The ships then altered their course and proceeded till they came to the larger range of the Lofoot (Loffoden) Isles. The people, subject to Denmark, were gentle and courteous; but the English, evidently ignorant of this coast, sought in vain to learn how these islands were situated with regard to the Norwegian shore. They proceeded onward to the large island of Seynam or Senjan, where they endeavoured without success to procure a pilot. They were now approaching the North Cape, and saw before them the abyss of the Arctic Ocean stretching onwards to the Pole, and soon to be filled with snows and tempests. In this critical conjuncture Sir Hugh assembled the commanders, and exhorted them to keep close together; but, in case of separation, appointed their rendezvous at Wardhuys, understood to be the principal port of Finmark. The wisdom of this precaution soon appeared; for, before

Course of voyage.

they could enter a harbour, there arose such "flaws of wind and terrible whirlwinds," that they were obliged to stand out to the open sea, and allow the vessels to drift at the mercy of the waves. Amid the thick mists of the next stormy night the two principal ships separated, and never again met. Clement Adams, who was with Chancelor, says, that as they were driving before the gale, the admiral loudly and earnestly called upon them to keep close to him; but that he himself carried so much sail, and his vessel was so superior, that the other could not possibly obey this order. Willoughby's pinnace was dashed to pieces amid the tempest; and next morning, when light dawned, he could see neither of his companions; but, discovering at length the smaller vessel called the Confidence, he continued his voyage. He now sailed nearly two hundred miles north-east and by north, but was astonished and bewildered at not discovering any appearance of a shore; whence it was manifest that "the land lay not as the globe made mention." The imperfect maps of those days appear not to have shown that rapid bend towards the south which the coast takes near the great opening of the Waranger Fiord, on which Wardhuys is situated. Instead, therefore, of approaching the borders of Norway, he was plunging deeper and deeper into the abysses of the Northern Ocean. At length the soundings, indicating a depth of 160 fathoms, proved that, as the navigators were out at sea, they must have fallen into some great and perilous error. They then for some time steered to the south-east, yet afterwards again turned to the north, and continued shifting their courses amid doubt and uncertainty. As they groped their way in this manner through these vast and stormy seas, land at length appeared, but high, desolate, and covered with snow, while no sound could be wafted over the waves except the crash of its falling ice, and the hungry roar of its monsters. This coast was evidently that of Nova Zembla; but there was no point at which a landing could

Separation of the ships.

Tempest.

Uncertainty and fear.

CHAP. IV.

be made. After another attempt to push to the northward, the mariners became sensible that Norway must be sought in an opposite direction. They turned to the south-west, and having followed that course for a number of days, saw the coast of Russian Lapland. At this point they must have been very near the opening of the White Sea, into which had fortune guided their sails, they would have reached Archangel, have had a joyful meeting with their comrades, and spent the winter in comfort and security. An evil destiny led them westward, in the hope, probably, of reaching Wardhuys, the only point in those immense seas of which they had any distinct knowledge.

Russian Lapland.

Rigour of the season.

The coast was naked, uninhabited, and destitute of shelter, except at one point, where they found it bold and rocky, but with some good harbours. Here, though it was only the middle of September, they felt already all the rigours of a northern season; intense frost, snow, and ice, driving through the air as though it had been the depth of winter. For these reasons, the officers conceived it inexpedient to search any longer along those desolate shores, but to take up their quarters in this haven till the ensuing spring. They were surprised by the appearances of rein-deer, foxes, Polar bears, and "divers beasts to them unknown, and therefore wonderful."

Loss of the expedition.

The narrative here closes, and the darkest gloom involves the fate of this first English expedition, for neither the commander nor any of his brave companions ever returned to their native land. After long suspense and anxiety, tidings reached home that some Russian sailors, as they wandered along those dreary tracts, had been astonished by the view of two large ships, which they entered, and found the gallant crews all lifeless. There was only the journal of the voyage, with a note written in January, showing that at that date they were still alive. What was the immediate cause of a catastrophe so dismal and so complete,—whether it was the extremity of cold, famine, or disease, or whether

all these ills united at once to assail them,—can now only be a matter of sad conjecture. Thomson thus pathetically laments their fate :— Poetic lament.

> Miserable they,
> Who, here entangled in the gathering ice,
> Take their last look of the descending sun ;
> While full of death, and fierce with tenfold frost,
> The long long night, incumbent o'er their heads,
> Falls horrible. Such was the Briton's fate,
> As with *first* prow (what have not Britons dared !)
> He for the passage sought, attempted since
> So much in vain.———

Chancelor.

We must now advert to the fortunes of Chancelor, with whom we parted amid the tempests which overtook the ships on the farthest shores of Norway. This commander pressed on, and, by keeping close to the land, or by obtaining better information, succeeded without any difficulty in reaching Wardhuys. There he waited for his companions seven days; after which, disregarding the alarming representations of the natives as to the dangers of the wild ocean which beats on their coast, he again set sail. "He held on his course towards that unknown part of the world, and sailed so far that he came at last to the place where he found no night at all, but a continual light and brightness of the sun, shining clearly upon the great and mighty sea." As it was now the month of August, it seems difficult to comprehend how the perpetual light of the northern midsummer should not have been perceived sooner, and that it should now be ascribed to the progress eastward. Probably a course of gloomy weather had preceded, so that, at this period, it became for the first time sensible. By this means, however, the adventurers were guided to the entrance of an immense bay, which was no other than the White Sea, as yet unknown to Western Europe. They espied a little fishing-boat, the crew of which, having never seen a vessel of similar magnitude, were as much astonished as the native Americans had been at the Spaniards, and taking the alarm, fled at full speed.

The White Sea.

CHAP. IV.

Terror of the natives.

Chancelor, with his party, pursued and overtook them; whereupon they fell flat on the ground, half-dead, crying for mercy. He endeavoured in the most soothing manner to relieve their apprehensions, and by looks, gestures, and gifts, expressed the kindest intentions. Upon being allowed to depart, they spread every where the report of the arrival "of a strange nation, of singular gentleness and courtesy." The natives came in crowds, and the sailors were plentifully supplied with provisions and every thing they wanted.

Muscovy.

Chancelor now, inquiring on what part of the world he had been thrown, learned that he was at the extremity of a vast country, then obscurely known in Britain by the title of Russia or Muscovy, and which was under the absolute rule of a sovereign named Ivan Vasilovitch. Although the court at Moscow was immensely distant, and could only be reached by sledges over the snow, he sought and at length obtained permission to visit the capital of this great potentate. His journey to that city carrying him out of the sphere of Arctic discovery, it will suffice to say, that he was received in the most satisfactory manner, and returned with a letter from the czar, expressing a cordial desire to open an intercourse with England, and to grant to the Merchant-adventurers every privilege necessary to enable them to carry on traffic in his kingdom. Those traders now assumed the title of the Muscovy Company; and the same officer was again sent out with credentials from Philip and Mary, who, in consequence of the premature death of Edward, then filled the throne. The original object of finding an eastern passage was not lost sight of; the captain being instructed to make every possible inquiry on the subject. The spirit of discovery at home was too ardent, however, to wait his return; and a small vessel, called the Searchthrift, being fitted out in 1556, was placed under the command of Stephen Burroughs, who on the first voyage had acted as master of Chancelor's vessel. Enthusiasm and hope seem to have risen as high as at the

Journey to Moscow.

The Muscovy Company.

departure of the former expedition. Sebastian Cabot went down to Gravesend with a large party of ladies and gentlemen, and, having partaken of such cheer as the ship afforded, invited the navigator and his company to a splendid banquet ashore. After dinner, a dance being proposed, the venerable pilot started up and tripped it along with the most youthful of the party. Second expedition

Under these cheerful auspices, the Searchthrift, on the 29th April, sailed from the Thames; but various circumstances delayed, till the middle of July, her arrival at the islands and straits of Waygatz between Nova Zembla and the continent. On the 21st the crew saw what they imagined to be land, but it proved to be a "monstrous heap of ice, which was a fearful sight to see." They were soon entangled in it, and for six hours could with difficulty avoid one mass without striking upon another. Soon afterwards an immense whale came so close that they might have thrust a sword into him; but, alarmed lest he should overset the vessel, Burroughs called together his men, and caused them to shout with all their might; upon which this mighty animal, which is neither fierce nor very courageous, plunged into the depths with a terrible noise. The Searchthrift. A whale.

Among the islands of Waygatz they descried a Russian sail. The master, named Loshak, seemed willing to avoid them, under the pretext that he was in extreme haste; but, on receiving a glass, two pewter spoons, and two knives, he presented seventeen wild geese, and gave much information. He told them that they were on the coast of the wild Samoiedes, who owned no subjection to the czar, but "will shoot at all men to the uttermost of their power that cannot speak their speech;" it was even said that they ate the Russians. He then conducted Burroughs to a place left by these people, where there were still three hundred of their idols, the rudest workmanship he ever saw. They consisted of figures of men, women, and children, "very grossly wrought; the eyes, mouths, and other parts, stained with blood." We may here mention that Johnson, one of the party, when at Russian vessel. Native idols.

CHAP. IV.

Native magic.

the Pechora, had been present at a mighty scene of magical incantation, performed by one of the great northern wizards. This personage first took a great sieve, somewhat resembling a drum, then he began to sing "as we use in England to halloo, whoop, and shout at hounds," to which the company responded with—*igha, igha, igha!* At length the magician fell into convulsions, and dropped down as if dead, though he could still be heard breathing. The visiter having asked the meaning of all this, was told—"Now doth our God tell him what we shall do!" Having thus allowed him to remain for a short time, the people began to cry *aghao, aghao!* whereupon he rose and again began to sing. He next took a sword and thrust it through his body, causing it to enter at the breast and issue at the back. Johnson saw it go into the shirt before and come out at the shirt behind, but does not seem to have scrutinized with any diligence its actual passage through the person. The magician then sat down with a vessel of hot water before him, and a line or rope of deer-skin passed round his body, over all which, as well as himself, a spacious mantle was spread. The ends of the line being left outside the robe, were drawn tight by two men, till something was heard falling into the dish. The Englishman, asking what this was, learned with horror that it was the magician's head, shoulder, and left arm, severed from the body by the violent pulling of the rope. He entreated that he might be allowed to lift the cloak and view this awful spectacle, but was assured that no one could do so and live. After the multitude had sung and hallooed for some time, the covering was removed, when the wizard came forth perfectly entire, all the parts cut asunder having it seems been miraculously replaced. This imposture, however gross and obvious, appears to have completely succeeded with the ignorant natives.

Magical tricks.

Ridiculous credulity.

Burroughs had passed fifteen leagues beyond the mouth of the Pechora, and the soundings indicated an approach to Nova Zembla, when he came to the conclusion that all attempts to penetrate farther this year would be

abortive. Among other causes, he mentions the untoward north and north-easterly winds, which were more powerful than in any other place he ever knew; the great and terrible abundance of ice, of which he had reason always to expect greater store; the nights waxing dark, and Winter with his storms beginning to draw on. Under these considerations he determined to return and pass the gloomy season at Colmogro, stating his intention to resume next summer the attempt to penetrate eastward; but this, in consequence of other employment, was never carried into effect.

Obstacles encountered.

There occurred now a tragical incident connected with northern discovery. The czar, Ivan Vasilovitch, sent with Chancelor an ambassador and orator, as he is termed, Osep Nepea Gregorowitch, in charge of four ships heavily laden with furs, wax, train-oil, and other Russian commodities, to the value of upwards of £20,000, which belonged partly to the merchants and partly to the imperial envoy himself. On this homeward voyage, two of the vessels were wrecked on the coast of Norway, a third reached the Thames, but the Edward Bonaventure, in which the chiefs of the expedition had embarked, was driven by the tempest into the Bay of Pitsligo, in the north of Scotland, where it went entirely to pieces. The English captain attempted, in a very dark night, to convey himself and the ambassador ashore in a boat; but the skiff was overwhelmed by the waves, and the former drowned, while the latter with great difficulty succeeded in reaching the land. He thence proceeded to London, where Philip and Mary gave him a splendid reception.

Tragical incident.

Wreck of Russian vessels.

From these events, an apprehension of disaster and feeling of dismay were associated with all such voyages along the northern boundary of Europe and Asia. This would not probably have damped the high spirit of enterprise by which the British were then animated; but the Muscovy Company, at the same period, had their attention diverted by the project of opening a communication with Persia and India across the Caspian, and by ascending the Oxus to Bokhara. This object

New projects.

CHAP. IV.

Asiatic researches.

they prosecuted at great expense, and by a series of bold adventures, in the course of which Jenkinson, Johnson, Alcocke, and others, penetrated deeply into the interior of Asia. An unusual degree of courage was indeed necessary to undertake this expedition, which was to be begun by passing round the North Cape to the White Sea; then, by a land journey and voyage down the Volga, across the whole breadth of the Russian empire to Astracan, before they could even embark on the Caspian. The truth is, such a scheme was marked by the ignorance not less than by the boldness of early mercantile enterprise. It was soon ascertained that no goods could bear the cost of so long a carriage by sea and land; that the products of India could be brought, and those of Europe returned, much cheaper and more commodiously, by the way of Aleppo and the Mediterranean, than by this vast circuit round the stormy North. If the former conveyance, therefore, could not stand a competition with the water-carriage by the Cape of Good Hope, how could the latter? It was abandoned, and no attempt for a long time was made to revive it.

Boldness and ignorance.

Renewed northern projects.

This channel of intercourse with India having failed, the attention of commercial and nautical adventurers was again attracted to the possibility of effecting a passage by the north and east of Asia. Intelligence had just been received respecting the river Oby, which was reported to enter the ocean by seventy mouths, and therefore seemed likely to communicate with the most important countries in the interior. John Balak, who had taken up his residence at Duisburg, on the Osella, wrote to Gerard Mercator, the famous cosmographer, a particular account of this river, and of the efforts made by Assenius, a native of the Netherlands, to penetrate eastward along the Asiatic coast. He mentions in particular another river, described as a tributary of the Oby, but which, from the details, appears rather to have been the Yenisei, down which came "great vessels laden with rich and precious merchandise, brought by black or swart people." In ascending this river, men came to the large

John Balak.

lake of Kittay (Baikal!), on whose banks were the Kara Kalmucks, who, he asserts, were the very people of Cathay. It was added, that on the shores of this lake had been heard sweet harmony of bells, and that stately and large buildings had been seen therein. Hence Mercator, in a letter to Hakluyt, infers that a very small progress beyond the limit already reached by navigators would carry them to the spacious realms of Japan and China. He maintained that the cape bounding the Gulf of Oby was no other than the great promontory of Tabis, which, according to Pliny, formed the north-eastern boundary of Asia; which being turned, the fortunate mariner would bear down direct upon Serica, Cathay, Cambalu,—those regions with which ancient and modern rumour had identified the position of the Chinese empire. This was underrating the breadth of Asia by a hundred degrees of longitude, or more than a fourth of the circumference of the globe; yet so imperfect were the sources of knowledge in those days, that the error, however immense, cannot be considered as fatal to the reputation of this great geographer.

The Yenisei.

Mistaken ideas.

To realize these views, Arthur Pet and Charles Jackman were supplied in 1580 with two vessels, the George and the William. On the 23d June they arrived at Wardhuys; from which they sailed on the 1st July. Approaching Nova Zembla they found themselves enclosed in a bay of ice, whence they were obliged to come out as they entered, and had much trouble before they were able to round the large field to which it belonged. On the 19th of the same month they saw Waygatz, and endeavoured to steer along its southern coast; but found the water so shallow that they were compelled to turn and make a circuit by the north. Proceeding onwards they came to a fair low island, and found a passage between the ice and the shore, which, however, at length closed, and they could advance no farther. At the same time the ships were separated by large fields of ice, and could communicate only by beating drums and firing muskets, till they were able to put about and rejoin

The George and William.

Waygatz.

CHAP. IV.

each other. They enjoyed now the most favourable breeze; but all was rendered vain by the state of the ice. "Winds we have had at will, but ice and fogs too much against our wills, if it had pleased the Lord God otherwise." The captains therefore determined to return to Waygatz, where they might confer together, and endeavour to find a more open passage. They were now obliged to warp from one piece of ice to another, some of them so large that they could not see beyond them from the topmast. They were repeatedly enclosed by these masses, enveloped with dark fogs, and obliged to make fast to icebergs, where, "abiding the Lord's leisure, they continued with patience." On the 13th August they were involved among loose ice, a fragment of which broke the stock of their anchor, "and many other great blows we had against the same, that it was marvellous the ship was able to abide them." The boat, being between the floe and the brig, was struck, its side driven in, and the vessel itself was made to recoil backward. Pet and Jackman did not reach Waygatz till the 16th August; by which time, it being found impracticable to penetrate again to the eastward, they sought only to repass the North Cape. They appear to have been zealous, well-intentioned men; but, not duly acquainted with the phenomena of ice, they adhered too closely to the land, whence large masses are continually detached or carried down by the rivers, while the open sea might have afforded better hopes of a prosperous navigation.

Impeding ice.

Great danger.

Fatal error.

The United Provinces.

The *United Provinces*, when roused to resistance by the ferocious bigotry of Philip and by the cruelties of the remorseless Alva, after a long, hard, and glorious struggle, succeeded in establishing their little territory as an independent republic. Thenceforth they began to look to the sea as the source of their greatness and prosperity. This element surrounded their country on all sides,—it towered, as it were, above them; and they had employed its inundations to defend their small domain against immensely superior forces. Commerce,—a commerce embracing the globe,—was necessary to compensate

for the narrow limits within which they were hemmed, and to raise them to the first rank among European states. The East was the most promising quarter; but its approaches were strictly guarded, and they had not yet a fleet which could cope with the mighty armadas of Spain in the Atlantic and Indian Oceans. The North alone was open to their enterprise; and, by passing its frozen boundaries, they hoped to arrive at the rich and celebrated empires whence so ample a tide of wealth had flowed into Europe.

Necessity for commerce.

The first expedition was undertaken by a private society of merchants, upon asking permission only of the States and their high admiral, Prince Maurice. Three vessels, with a small yacht, were equipped at Amsterdam, Enchuysen, and Zealand. The pilot of the ship belonging to the capital, and to whose guidance the expedition was generally intrusted, was William Barentz, one of the most expert nautical men of the age.

Private association.

The squadron sailed from the Texel on the 5th June 1594, and on the 23d arrived at the island of Kilduin in Muscovy. Approaching Nova Zembla it was formed into two divisions, one of which attempted to pass by the old route of the Strait of Waygatz; but Barentz himself, taking a bolder course, endeavoured to pass round to the northward of Nova Zembla, that great insular mass which opposed, like a barrier, his eastward progress. Here he coasted the Bay of Loms, so called from the numerous flocks of the bird of that name, probably the penguin, with wings so small, compared to its ample body, that it seemed astonishing how they could support the creature's motion in the air. Passing the Black Cape and William's Isle, his people saw various features characteristic of the Arctic world; among others the walrus in large herds, of which they give a very good description. Subsequently, at the Orange Isles, they came upon two or three hundred lying in heaps upon the sand, and basking in the sun. Having formed the erroneous idea that these animals are helpless on shore, the sailors marched against them as to an

First expedition.

Bay of Loma

CHAP. IV.

Attack of the Walrus

assured victory, congratulating themselves on the multitude of valuable teeth which would become an easy prize. But so completely were they mistaken, that these gallant amphibia beat them off with loss and dishonour, breaking in pieces the pikes, hatchets, and sabres, employed in this fruitless assault. The crews sustained also the fierce encounter of the Polar bear. Having seen one on the shore, they entered their shallop and discharged several balls at him, but without inflicting any deadly wound. They were then happy when they succeeded in throwing a noose about his neck, hoping to lead him like a lapdog, and carry him as a trophy into Holland. They were not a little alarmed by his mighty and tremendous struggles; but what was their consternation, when he fastened his paws on the stern and entered the boat! The whole crew hastily clung to the poop, expecting instant death, either from the sea or from his jaws. Providentially at this moment the noose got entangled with the iron work of the rudder, and the creature struggled in vain to extricate himself. Seeing him thus fixed, they at length summoned courage to advance, and despatched him with their spears.

Unexpected resistance.

Northern point.

Barentz, by the 1st August, reached the northern extremity of Nova Zembla, in lat. 77°; but the wind blew so strong, separating the ice into large flakes, that he and his crew, rather early it should seem, gave up hope and resolved to return.

The companion vessels.

The two other vessels meantime pushed on along the coast, and in due time arrived at Waygatz. This island had a very agreeable aspect, being covered with verdure and abundance of flowers, herbs, plants, and particularly a great store of leeks. Large trees were lying piled in heaps over each other, which appeared very surprising, when neither on this nor the opposite coast was there a single one growing; but it was rightly judged that they were brought down the rivers of Tartary, and drifted hither by winds and currents. On turning a point the Dutch observed one of those great collections

of rudely carved images which had been formerly remarked by Burroughs. These figures represented men, women, and children, some of them having from four to eight heads, all with their faces turned eastward, and many horns of rein-deer lying at their feet: it was therefore called the Cape of Idols. Forster alleges that the Samoiedes, on this ground, have been falsely charged with idolatry, and that it were more charitable to conclude these to have been images of departed friends whom they cherished with pious veneration; but it does not very exactly appear how they should have had friends with six or eight faces. Images.

The expedition had some difficulty in working their way through the Strait of Waygatz,—after passing which, and sailing for some space along the coast of Nova Zembla, they were repelled by the icy barriers. Having by perseverance rounded these, they arrived at a wide, blue, open sea, with the coast trending rapidly southward; and, though this was only the shore of the Gulf of Oby, they doubted not that it was the eastern boundary of Asia, and would afford an easy passage down upon China. Instead, however, of prosecuting this voyage, they determined to hasten back and communicate to their countrymen the joyful intelligence. The two divisions met on the coast of Russian Lapland, and arrived in the Texel on the 16th September. Strait of Waygatz.

The information conveyed in regard to the supposed success of this expedition kindled the most sanguine hopes in the government and people of Holland. Prince Maurice and the States-general no longer confined themselves to empty praise, but supplied funds to aid in a fresh voyage. Six vessels were fitted out, not as for adventure and discovery, but as it were to carry on an extensive traffic in the golden regions of the East. They were laden with merchandise, and well supplied with money; while a seventh, a light yacht, was instructed to follow them till they had passed the promontory of Tabis; when, having finally extricated themselves from the Polar ices, and directed their Sanguine hopes.

CHAP. IV.

New expedition.

course to China, it was to return to Holland with the joyful tidings. Peter Plancius, the most celebrated cosmographer of that age, drew up a map for their guidance,—doubtless in our eyes a very crude performance, but which combined all the geographical lights of that ignorant period.

Abortive results.

The armaments which at that early epoch were set forth with the greatest pomp and expense, usually issued in the most abortive results. Those large and heavily laden vessels were peculiarly ill-fitted for winding their way through narrow seas and channels encumbered with ice. Of all the northern expeditions, accordingly, none answered less than the one now described the cost and magnificent expectations with which it had been equipped.

Tardy departure.

The adventurers left the Texel on the 2d of June (1595), a period of the season decidedly too late. Nothing particular occurred till the 4th August, when they reached the pass between Waygatz and the continent, to which they had given the appellation of the Strait of Nassau. They soon afterwards came to the Cape of Idols; but, though the figures were still drawn up in full array, no trace was found of the habitations which they might have seemed to indicate. A Russian vessel, however, constructed of pieces of bark sewed together, was met on its way from the Pechora to the Oby in search of sea-horse teeth, whale-oil, and geese. The sailors accosted the Dutch in a very friendly manner, presented eight fat birds, and, on going on board one of the ships, were struck with astonishment at its magnitude, its equipments, and the high order with which every thing was arranged. This being a fast-day, they refused meat, butter, and cheese; but on being offered a raw herring, eagerly swallowed it entire, head and tail inclusive.

Samoiedes.

The navigators, after considerable search, discovered a party of Samoiedes, who are described as a people of small stature, broad and flat face, little eyes, short legs, and wrapt entirely in rein-deer skins, except a few who

wore coloured cloth lined with fur. They manifested considerable jealousy of the strangers, and on the approach of the interpreter drew their arrows to shoot him; but he called aloud, "We are friends!" Upon which they laid down their weapons, and saluted him in the Russian style, by bending their heads to the ground. The intercourse which followed was conducted on their part with considerable courtesy, though mingled with a feeling of precaution and even of alarm. On hearing a gun fired, they leapt about like madmen, till assured that no harm was intended; and they were then amused by seeing a little stone placed on an eminence shattered to pieces by a musket-ball. A sailor went boldly up to the chief, dignified in the narrative with the title of king, and presented him with some biscuit, which the monarch graciously accepted and ate, though looking around somewhat suspiciously. At length the parties took a friendly leave; but a native ran after the foreigners with signs of great anger, on account of one of the rude statues which a seaman had carried off. It was now concluded that these figures were local divinities, and that the bones found lying before them were the remains of sacrifices. The Dutch seem to have formed a still lower estimate than Burroughs of Samoiede sculpture. The images are described as little better than logs, somewhat rounded at the top to represent a head, with a slight projection for the nose, two little holes for eyes, and one larger aperture to represent the mouth.

Jealousy of the natives.

Friendly intercourse.

The discoverers, in answer to repeated inquiries, had been informed, that beyond a point which might be reached in about five days, there extended a large open sea to the south-east. They made several attempts to reach this point; but, after emerging from the passage of Waygatz, were always driven back by large bodies of floating ice. They persevered till the end of September, when these masses entered the strait in such force, that they were obliged with all speed to quit it by the western opening, and bend their sails towards Holland,

Renewed attempt.

CHAP. IV.

without having accomplished any one of the brilliant objects for which they had been sent out.

General disappointment.

A very considerable disappointment was experienced at the failure of an expedition concerning which such sanguine hopes had been cherished. The States-general declined to supply funds for a fresh armament; but they proclaimed a reward to any individual or body of men by whom the end in view should be successfully accomplished. The town-council of Amsterdam, with great spirit, determined to fit out another squadron on a smaller scale, and equipped only for discovery. They prepared two vessels, which were respectively intrusted, one to Barentz, and the other to John Corneliz Ryp, seemingly with equal power. Suspecting, perhaps, a prevalence of nostalgia, they admitted on board none but unmarried persons, who, it was hoped, would be animated with a more resoiute spirit, and less inclined to long for home.

Third expedition.

The vessels, still rather too late, set sail on the 10th of May 1596. Their object seems to have been to avoid the coast of Russia and the Straits, to shun even Nova Zembla, and to direct their course through the wide expanse of the Northern Ocean. They stood, however, too much towards the west, and on the 22d came in view of the Shetland Islands. Barentz urged that they should now turn due east in order to compensate this deviation; but Corneliz represented that this would carry them at once into the Strait of Waygatz, the scene of so many abortive efforts, and insisted upon steering towards the north-north-east. After changing their course, they saw the most brilliant celestial phenomenon they had ever witnessed. The sun was attended by two parhelia or mock suns, while a bright rainbow traversed all the three, and two other bows crossed the heavens in different quarters. On the 5th June some sailors called out that a multitude of white swans were swimming in the water; but the more experienced gave warning that these swans would prove pieces of ice, and accordingly they soon found themselves in the midst of

Ice.

these moving masses. For some days they proceeded between two currents of them as between two lands; while the colour of the water, which was as green as grass, gave them the idea of being near the country called Greenland: but Scoresby has shown, as is elsewhere noticed, that this tint is produced by the contents of the sea itself. On the 9th they observed a long island rising abruptly into steep and lofty cliffs, the highest of which has borne the appropriate name of Mount Misery. Pennant, who erroneously supposes that Bennet, in 1603, had the merit of originally making it known, remarks,—"The horror of this isle to the first discoverers must have been unspeakable; the prospect dreary; black where not hid with snow, and broken into a thousand precipices. No sounds but of the dashing of the waves, the crashing collision of floating ice, the discordant notes of myriads of sea-fowl, the yelping of Arctic foxes, the snorting of the walruses, or the roaring of the Polar bears." The hills were so excessively steep, that though a party contrived to clamber up they durst not look down, and the descent threatened the adventurers with no small danger. At length, applying their backs to the precipice, they slid down with safety; which Barentz, who looked up, could never have thought possible. From a bear, which they attacked, and vainly attempted to secure by a noose, they gave to it the name of Bear Island, which the English afterwards attempted to supplant by that of Alderman Cherie. Proceeding onward, still by too northerly a course, they reached the parallel of 80°, and discovered a coast, which soon proved to belong to a country of great extent. This was Spitzbergen, which, from the latitude they had attained, they probably approached near its northern point, called Hakluyt's Headland. The name of Greenland, which has in some degree adhered to this island, was given under the erroneous impression of its being a part of that extensive coast, so called by the Icelanders; to distinguish it from which, the epithet East has usually been applied to it.

Strange ocean tint

Horrors of the ice.

Spitzbergen

CHAP. IV.

Retracing the course.

The Dutch, finding their progress stopped by this unexpected shore, now retraced their steps along its deep bays, still steering southward, till they found themselves again at Bear Island. Here Corneliz and Barentz differed once more; the former still maintaining his original views, and recommending that they should instantly push northwards, and endeavour to find their way along the eastern coast of the newly discovered land; but Barentz insisted, more rationally, that they ought to steer east-south-east, and endeavour to round the northern point of Nova Zembla. Being unable to agree, and the latter having resolved for this time not to yield, they determined to separate, and each to make trial of his respective course. Barentz, whom we follow, proceeded according to his plan, till at mid-day, on the 17th July, he found himself off the coast of

Nova Zembla.

Nova Zembla; but, as he had gone too far south, he was obliged to turn northwards once more. He pushed on as vigorously as possible; yet it was not till the 6th August that he doubled Cape Nassau; when, finding the ice drifting along in large masses, and being involved in deep fogs, he judged it expedient to moor his vessel to a large iceberg. As the master was walking on deck, he saw a large bear endeavouring to scale the sides of the ship. He immediately called out, "All hands up!" and the crew having mustered, raised loud cries, which induced the monster to retreat; but he soon returned to the charge. They had now a sail raised along the deck, and four guns loaded, which were fired with such effect that the savage animal finally withdrew.

Separation of the ice.

On the 10th of August the ice began to separate, and the seamen remarked that the *berg* to which they were moored was fixed to the bottom, and that all the others struck against it. Afraid that these loose pieces would collect and enclose them, they quitted their position, and sailed on. The ice was already forming on the surface, and the ship in sailing through made it crack on all sides. Notwithstanding, they worked on their way, fastening themselves to successive fragments, one

of which rose like a steeple, being twenty fathoms above and twelve below the water. At one time they saw round them more than four hundred large icebergs, the fear of which made them keep close to the shore, not aware of that being the quarter where these dangerous bodies were formed, and along which they chiefly ranged. However, they still proceeded, and having passed what they called Little Icy Cape came to Orange Island, which constitutes the northern extremity of Nova Zembla. Here ten men swam on shore, and having mounted certain piles of ice, which rose as it were into a little mountain, they had the satisfaction of seeing the coast trending southward, and a wide open sea to the south-east. They hastened back to Barentz with these joyful tidings, and the success of the voyage was now considered almost secure.

Floating icebergs.

But these hopes were delusive; for, after doubling what was called Cape Desire (Zelania), the icebergs mustered in such force that the crews gave up all idea of doing more than reach the Strait of Waygatz on their return home. They were driven, however, so rapidly before the floating masses, that three men, who had mounted one of them to reconnoitre, would have been left behind, but for extraordinary exertions of agility. They were now drawn into what they called Icy Port, and the vessel was thrown into a position almost perpendicular, with one end nearly touching the bottom. From this critical attitude they were relieved next day; but fresh masses of ice continually poured in, augmenting the terrible ramparts with which they were enclosed. One side of her was raised by successive pieces jammed beneath it, but the other was similarly elevated; so that she was lifted to the top of the ice as by machinery. All this time the cracking, both around them and within the ship itself, was so dreadful that they were in continual fear of its parting into fragments; but the internal noise, arising merely from the freezing of the juices of the timber, was much less dangerous than they imagined.

Doubling Cape Desire.

Icy Port

Critical position.

They now felt that they must bid adieu for this year

CHAP. IV.

Imprisoned in the ice.

to all hopes of escape from their icy prison. As the vessel was cracking continually, and opening in different quarters, they made no doubt of its going to pieces, and could only hope to survive the winter by constructing a hut, which might shelter them from the approaching rigour of the season. Parties sent into the country reported that they had seen footsteps of rein-deer, also a river of fresh water, and, what was still more important, a great quantity of fine trees, with the roots attached to them, strewed upon the shore. Not one of these could have grown on the frozen soil of Nova Zembla; but, as already noticed, they were all brought down the rivers of Muscovy and Tartary, and wafted over the ocean by winds and currents. This circumstance gave a peculiarly cheerful colour to the hopes of the mariners. They trusted that Providence, which had in this surprising manner furnished materials to build a house, and fuel to warm it, would supply also whatever was necessary for their passing through the approaching winter, and for returning at length to their native country. A sledge was instantly formed, and three men cut wood, while ten drew it to the spot marked out for the hut. They were desirous to raise a rampart of earth for shelter and security, and with this view kindled a fire in the hope of softening the ground, but in vain.—The carpenter having died, it was found impossible to dig a grave for him, and they lodged his body in a cleft of the rock.

Floating wood.

Cutting wood.

Building.

The building was carried on with ardour, as affording the only hope of life; yet the cold endured in this operation was intense, and almost insupportable. When a nail was put into the mouth, it froze to the lip, and brought the skin away, drawing blood. The snow sometimes fell so thick, for days successively, that the seamen could not stir from under cover. They had at the same time perpetual combats with the Polar bear. On one occasion the master saw from the ship three of these furious animals making their way towards the working-party, to whom he gave warning by uttering loud cries.

Polar Bear.

They immediately ran towards the vessel; when one of them, in his haste, fell into a cleft in the ice, and was given up for lost; but the bears overlooking him, continued their chase of the main body. The sailors having at length reached the ship, made the circuit of it, and mounted from behind; but their pursuers entered in front, and advanced furiously to the attack. A man, sent down to the kitchen to light a match, was in too great haste and agitation to accomplish that simple process, and the muskets were thus useless. The crew could now only parry the assault by throwing at their assailants whatever came first to hand, by which the attention of the animals was always for a moment attracted, though they returned to the charge with fresh vigour. At length, when matters seemed approaching to extremity, a halberd was darted at the largest, which struck him on the mouth with such force that he retreated from the vessel, and the others followed.

Escape from bears.

Notwithstanding this intense rigour, winter had not yet thoroughly set in. Several days of south-west wind dissolved a vast quantity of ice, and the mariners saw a wide open sea without, while the vessel was enclosed within, as it were, by a solid wall. By October they completed their hut, and prepared to convey thither their provisions and stores. Some painful discoveries were now made. Several tuns of fine Dantzic beer, of an agreeable and medicinal quality, and from which they had anticipated much comfort, had frozen so hard as to break the casks, bursting even the iron hoops by which they were bound. The contents, indeed, existed in the form of ice; but this, when thawed, had merely the taste of bad water; and though in the middle they found a liquor concentrating in itself the whole strength of the beer, it had not the true flavour of that beverage. They made trial of mixing the two together, but without being able to restore its proper relish and virtue.

Temporary thaw.

Destruction of beer.

The sun, which had hitherto been their only pleasure and consolation, now began to pay only short visits, and to give signs of his approaching departure. He rose in

Departure of the sun.

CHAP. IV.

The moon.

the south-south-east, and set in the south-south-west, while the moon was scarcely dimmed by his presence. On the 1st November his full orb was still seen for a short interval; on the 2d it rested on the horizon, from which it did not detach itself; and on the 4th the sky was calm and clear, but no sun rose or set.

Night of winter.

The dreary winter night of three months, which had now set in, was not, however, without some alleviations. The moon, which happened to be at the full, wheeled her pale circle round the whole horizon. With the sun disappeared also the bear, and in his room came the Arctic fox, a beautiful little creature, whose flesh resembled kid, and furnished a variety to their meals. They found great difficulty in the measurement of time, and on the 6th, as they did not rise till it was late, a controversy ensued whether it was really day or night. The cold had stopped all the clocks; but they afterwards formed a sand-glass of twelve hours, by which they contrived tolerably well to estimate the duration of their dreary solitude.

Breaking of the ice.

On the 3d December, as the sailors lay in bed, they heard from without a noise so tremendous, as if all the mountains of ice by which they were surrounded had fallen in pieces over each other. In fact, the first light which they afterwards obtained showed a considerable extent of open sea; yet this disruption must have been produced by some internal movement of the ice, and not by any tendency towards thaw.

Intense cold.

As the season advanced the cold became more and more intense. Early in December a heavy fall of snow stopped up all the passages by which the smoke could escape; so that a fire, at all fitted for the dreadful inclemency of the season, led to the danger of suffocation. The men were thus obliged to keep the room at a miserably low temperature, for which they used the imperfect remedy of heated stones, passed from one bed to another. An unwonted difficulty accompanied every

Washing.

attempt to wash their clothes: whenever they took these up from the boiling water, and began to wring them,

the linen froze in their hands; and when they hung them up to dry, the side farthest from the fire was hard frozen. The cold becoming always more rigorous, ice two inches thick was formed on the walls. At length their sufferings came to such an extremity, that, casting at each other languishing and sorrowful looks, they anticipated that this must end in the extinction of life. They now resolved that, cost what it might, they should for once be thoroughly warmed. They repaired, therefore, to the ship, whence they carried an ample supply of coal; and having kindled an immense fire, and carefully stopped up the windows and every aperture by which the cold could penetrate, they brought themselves into a most comfortable temperature. In this delicious state, to which they had so long been strangers, they went to rest, and talked gaily for some time before falling asleep. Suddenly, in the middle of the night, several wakened in a state of the most painful vertigo; their cries roused the rest, and all found themselves more or less in the same alarming predicament. On attempting to rise they became dizzy, and could neither stand nor walk. At length two or three contrived to stagger towards the door; but the first who opened it fell down insensible among the snow. De Veer, who stood behind, revived him by pouring vinegar on his face; and the wintry air, which had been their greatest dread, now restored life to the whole party.

Great sufferings.

Means resorted to for heat.

These unhappy mariners being thus compelled to afford a certain access to the blast, its effects became more insupportable than before. It seemed as if the fire had lost all power of conveying heat; their clothes were white with snow and hoar-frost; their stockings were burned before the feet felt any warmth; and this result was made known by smell rather than by feeling. Yet, in the very midst of these sufferings, remembering that the 6th January was the Feast of the Kings, they besought the master that they might be allowed to celebrate the festival. They had saved a little wine and two pounds of flour, with which they fried pancakes in

Insupportable cold.

Feast of kings.

CHAP. IV.

King of Nova Zembla.

oil; the tickets were drawn, the gunner was crowned King of Nova Zembla, and the evening passed as merrily as if they had been at home round their own firesides. Nothing can more strikingly illustrate the salutary effects produced even in the most depressing circumstances by mental occupation and amusement,—an expedient of which Captain Parry afterwards made so happy a use.

Abatement of darkness.

About the middle of January the crews began to experience some abatement of that deep darkness in which they had been so long involved, and which prevented the exercise and amusement so necessary to their health. Soon after, about mid-day, a faint flush was seen to tinge the horizon; and this first dawn of the annual morning revived in their hearts the hope which was almost extinguished. On the 24th, De Veer and two others ran in to say that they had seen a portion of the sun's disc. Barentz demonstrated, on astronomical principles, that this could not take place for fifteen days to come. Many, however, trusted more to the eyes of their companions than to scientific deductions; and bets were taken, that could not be decided in the two following days, in consequence of a heavy fog with which the air was oppressed. The 27th, however, being clear, they went out in a body, and saw ascending above the horizon the full orb of that great luminary. Joy took possession of their hearts, and Barentz in vain continued to prove that this appearance was contrary to every principle of science. He was not aware of the extensive power of refraction in that northern atmosphere, which, in Captain Parry's expedition, produced a similar abridgment in the duration of the Polar winter.

First appearance of the sun.

Great joy.

Returning cheerfulness.

Affairs now assumed a more cheerful aspect. Instead of constantly moping in the hut, the men went out daily, employed themselves in walking, running, and athletic games, which warmed their bodies and preserved their health. With the sun, however, appeared their old enemy the bear. One attacked them amid so thick a mist that they could not see to point their pieces, and

sought shelter in the hut. The animal came to the door, and made the most desperate attempts to burst it open; but the master keeping his back firmly set against it, the unwelcome visiter withdrew. Soon afterwards, however, he mounted the roof, where, having in vain attempted to enter by the chimney, he made furious efforts to pull it down, tearing the sail in which it was wrapped; all the while his frightful roarings spread dismay through the mansion below: at length he finally retreated. Another came so close to the man on guard, who was looking another way, that on receiving the alarm from those within and looking about, he saw himself almost in the jaws of the bear; however, he had the presence of mind instantly to fire; when the brute, being struck in the head, attempted to escape, but was pursued and despatched.

Renewed attacks of bears.

The first reappearance of the sun had inspired hopes that the weather would become continually more mild and agreeable. It was, therefore, a severe disappointment, when, in February, a heavy gale from the north-east brought a cold more intense than ever, and again buried the hut under snow. This was the more painfully felt, as the men's strength, and supply of generous food to recruit it, were alike on the decline. They no longer attempted daily to clear a road, but those who were able went out and in by the chimney. A dreadful calamity then overtook them in the failure of their stock of wood for fuel. They began to gather all the fragments which had been thrown away, or lay scattered about; but these being soon exhausted, it behoved them to carry out their sledge in search of more. To dig the trees, however, out of the deep snow, and drag them to the hut, was a task which, in their present weak state, would have appeared impossible, had they not felt that they must do it or perish.

Return of snow.

Failure of fuel.

In the course of March and April the weather became milder, and the attention of all the crew was drawn to plans and prospects of return. Southward, on the side of Tartary, the icy masses were still floating, but to the

Milder weather

CHAP. IV.

Increasing obstructions of the ship.

north-east there was an open sea. Yet the barriers which enclosed the ship not only continued, but, to their inexpressible grief, rapidly increased, probably from the fragments which drifted into the harbour upon the breaking up of the great exterior field. In the middle of March these obstructions were only 75 paces broad; in the beginning of May they were 500. The piles of ice resembled the houses of a great city, interspersed with apparent towers, steeples, and chimneys.

Resolution to escape in the boats.

The sailors, viewing with despair the predicament in which they were placed, earnestly entreated permission to fit out the two boats, and in them to undertake the voyage homeward. The master at length agreed, provided there was no better prospect by the end of May. From the 20th to the 26th, a north wind came on, and blew upon them a still greater quantity of ice; so that they no longer hesitated to begin their work, and to bring from the ship sails and cordage. The extrication

Extrication of the boats.

of the boats from under the snow was a most laborious task, and the equipment of them would have been next to impossible, but for the enthusiasm with which it was undertaken. By the 11th June they had the vessels fitted out, their clothes packed, and the provisions embarked. Then, however, they had to cut a way through the steeps and walls of ice which intervened between them and the open sea; while amid the extreme fatigue of digging, breaking, and cutting, they were kept in play by a huge bear, which had come over the frozen sea from Tartary.

Embarkation in the boats.

At length, having embarked all their clothes and provisions, they set sail on the 14th with a westerly breeze. In the three following days, having passed the Cape of Isles and Cape Desire, they came to Orange Isle, always working their way through much encumbering ice. When they were off Icy Cape, Barentz, long struggling with severe illness, and now feeling his end approach, desired that he might be lifted up to take a last view of that fatal promontory, on which he gazed for a considerable time.

On the following day the vessels were again involved in masses of drift-ice, and were so forcibly struck, as well as squeezed between opposite fields, that the men bade a final adieu to each other. Seeing, however, a body of fixed ice at a little distance, De Veer took a rope and leaped from fragment to fragment, till he arrived on the firm surface. A communication thus formed, they landed first the sick, then the stores and provisions, and, finally, they drew up the boats themselves. During this detention, Barentz, being informed of the severe illness of one of the men named Adrianson, said that he himself was not far from his end. As he continued, however, conversing and looking on a chart of the voyage made by De Veer, it was thought that his disease could not be so serious, till he pushed aside the paper, asked for a draught of water, and immediately expired. This event deeply afflicted the crews, both from their personal attachment to him, and the loss of his skill in piloting the vessels.

Involved in masses of drift-ice.

Death of De Veer.

The sailors with some drift-wood, repaired the boats; yet the ice was still close around, and they were struck with the fear that it was not possible for them to escape from this bank. On the 22d, however, open sea appeared at a little distance; and having dragged the boats over successive pieces of ice, they were again afloat. After three days they reached Cape Nassau, the ice frequently stopping them, but separating again like the gates of a sluice, and allowing a passage; though on the 26th they were obliged once more to disembark and pitch their tents on the frozen surface. On the opposite coast they saw immense herds of the walrus, and the air was darkened with numberless birds. While they were fast asleep in the tent, the sentinel called out, "Three bears! three bears!" The whole crew were instantly out; but their muskets were charged only with small shot. However, "these sweetmeats," though they could not inflict any serious wound, induced the monsters to turn, when one of them was pursued and killed. The survivors carried off their dead companion

Boats repaired.

Attack of bears.

CHAP. IV

to the most rugged parts of the ice, where they devoured a large portion of his carcass.

New dangers.

The year was now advanced; the bright light of the sun and the occasional south-westerly breezes dissolved the ice, and gradually opened a way before them. But dangers of a new class soon succeeded. The distinction between fixed and floating ice had now almost ceased, the former continually melting away. When they thought themselves lying secure on a large field, a body of icebergs came in from the sea, struck and dashed it to pieces. The packages were separated from the boats, and several dropped into the water. With much labour and peril they scrambled over the detached fragments to a place of safety, while the weighty articles sank into the softened ice, not without the greatest risk of falling to the bottom. For twelve hours the sailors floundered through this loose and broken surface before they could establish themselves on the field which was attached to the land.

Open sea.

The 2d of July was the finest day yet seen in Nova Zembla; and the weather continuing favourable, produced on the 7th an open sea, to which, with great labour, the men succeeded in dragging the boats. From this time their progress, though often obstructed, was never entirely stopped.

Capture of birds.

In several of the rocky bays they caught an immense number of birds, which, not having yet learned to fear man, allowed themselves to be taken by the hand. Near Admiralty Bay they saw two hundred walruses lying on a bank of ice, and attacked them; but these powerful animals advanced to the combat, snorting and blowing in so tremendous a manner that, had not a fresh wind sprung up, the mariners might have had to bewail a serious loss; and they regretted, amid so many inevitable evils, to have brought on themselves one so very unnecessary.

St Lawrence Bay.

On the 28th, after passing the bay of St Lawrence, when they came near the southern extremity of Nova Zembla, they discovered with surprise and joy two Russian vessels at anchor. They approached and were

well received by the crews, several of whom recollected having met them in the former voyage, and were truly astonished, instead of the large and handsome vessels whose equipment they had so much admired, to see them in miserable open boats, with pale and meagre countenances. After mutual presents, the parties agreed to sail together to Waygatz, but were separated by a heavy gale. On a small isle the Dutch found abundance of *cochlearia*, or scurvy-grass, by the use of which the sick recovered in a manner almost miraculous. On the 3d August they steered their course to the south-south-west, and though somewhat obstructed by ice, came next day in view of the Russian coast. They had a tedious but safe voyage to Kola, where, to their joyful surprise, they found John Corneliz, who displayed the greatest kindness, and afforded them a comfortable passage to Amsterdam. As no account was ever given of this commander's own proceedings, it may be presumed that they did not lead to any important discovery.

Reception by Russian sailors.

Use of cochlearia.

Arrival at Kola.

The question as to a north-eastern passage was not yet considered as finally determined. The London merchants next took it up, and in 1608 sent out Henry Hudson, who had already distinguished himself by a voyage to Spitzbergen, and proved one of the greatest of the early navigators. The design of this able seaman appears to have been, not to entangle himself in the straits and islands on the Russian coast, but to strike at once into the channel between Nova Zembla and Spitzbergen. He dropped down to Blackwall on the 22d April, and on the 3d June saw the North Cape, bearing south-west. He still pushed on to the north and east, till he reached the latitude of 75°, when he found himself entangled among ice. He at first endeavoured to push through, but, failing in this attempt, turned and extricated himself with only "a few rubs." On the 12th June he experienced a thick fog, and had his shrouds frozen; but the sky then cleared, and afforded bright sunshine for the whole day and night. On the 15th, Thomas Hilles and Robert Rayner so-

Henry Hudson.

Entangled in the ice.

CHAP. IV.

Supposed mermaid.

lemnly averred, that, while standing on deck, they saw a mermaid. This inhabitant of the deep is described as having a back and breast like a woman, a very white skin, and long black hair flowing behind; but on her turning round they descried a tail as of a porpoise, and speckled like a mackerel. It seems uncertain which of the cetaceous tribe suggested this resemblance to the human form.

Coast of Nova Zembla.

Hudson continued to push on eastward, varying according to the wind, between the latitudes of 74° and 75°. On the 25th, however, heavy north and north-easterly gales, accompanied with fog and snow, obliged him to steer south-easterly; and this course, on the 26th, brought him to the coast of Nova Zembla, in lat. 72° 25′. Here, with premature resignation, as June was not yet closed, he concluded that it were fruitless to hold this year a more northerly course; in place of which he resolved to try the old route of the Waygatz. From this he was diverted by the view of a large sound, which appeared to afford an equally promising opening. On its shores also were numerous herds of the sea-horse, from the capture of which he hoped to defray the expense of the voyage. Nova Zembla, on the whole, seen at midsummer, presented to him somewhat of a gay aspect. He says, it is "to man's eye a pleasant land; much mayne land, with no snow on it, looking in some places green, and deer feeding thereon." The sound, however, as might have been conjectured from the strong current which flowed down, terminated in a large river, and the boats soon came to anchorage in one fathom. The morses also, though seen in great numbers, could never be brought to close quarters. The ice now came in great masses from the south, "very fearful to look on;" and though, "by the mercy of God and his mighty help," he escaped the danger, yet by the 6th of July he was "void of hope of a north-east passage;" and, determining to put his employers to no farther expense, hastened home to England.

Pleasant summer aspect.

Return to England.

We know not whether the Muscovy merchants were

fully satisfied with the zeal displayed by Hudson in this expedition; for we find him in 1609 setting sail from the Texel under the auspices of the Dutch East India Company, whose hopes of a northern passage had again revived. On the 5th May he passed the North Cape, and on the 19th came in view of Wardhuys. It may be remarked, however, that our countryman, though so excellent a navigator, is a most unsatisfactory writer. His narrative, amid vague complaints of fog and ice, shows nothing distinctly but that he determined to repass the North Cape, whence he steered across the Atlantic to America. Forster says that he reached Nova Zembla,—an assertion directly contrary to the captain's own narrative, and inconsistent with the time spent in this part of the voyage. According to Constantin, the crew, consisting chiefly of seamen accustomed to sail to India by the Cape of Good Hope, were soon alarmed by the tempests and floating ice of the North. The truth is, the commander's own mind seems to have been fixed on north-western discovery. This appears from several hints in his second narrative; and he was probably inclined to content himself with a mere show of proceeding eastward, that, apparently baffled, he might follow his favourite direction. He seems to have been impressed with the expectation of finding an open sea between Virginia and Newfoundland; and in fact he discovered the important bay which receives the river, called after him the Hudson, and on which New York was afterwards built; but this lies out of our present sphere.

Employment of Hudson by the Dutch.

Hudson's narrative.

His own views of success.

Discovery of the river Hudson.

The Russia Company, at a subsequent period, made some attempts to establish a factory on the Pechora; but after persevering for two or three seasons, they relinquished the undertaking.

In 1676, Captain John Wood, on his own sanguine representations as to the great probability of a north-eastern passage, was sent out by the Admiralty in the Speedwell. On the farther coast of Nova Zembla, however, his vessel went to pieces, and the crew, cast on

Captain John Wood.

CHAP. IV.

Shipwreck of Wood.

shore, with difficulty reached their consort, the Prosperous Pink, which afforded them a passage home. Wood, though he had done nothing to throw light on the subject, brought back an impression respecting it so very gloomy, that the plan of penetrating to India in this direction was thenceforward given up, and has not been revived even in the eras of the most enthusiastic enterprise.

Attempts by the Russian government.

It may be proper in this place to notice the attempts recently made by the Russian government to complete the survey and exploration of Nova Zembla, to our knowledge of which little addition had been made since the time of Barentz. To effect this object an expedition was despatched in 1819 under Lieutenant Lazaref; but it encountered such formidable masses of ice, that he was obliged to return without in any degree effecting his object.

Captain Litke.

Captain Litke was employed in the same undertaking in 1821, but the issue was almost equally unfavourable. In the following year, however, the same officer was again sent to sea; and, after an extensive survey of the coast of Lapland, came, on the 8th August, in view of Nova Zembla. During his progress along the western shore, he found it in general to correspond with the delineation given by Barentz, recognising in particular Admiralty Isle; after which he reached a headland supposed to be the Cape Desire of that navigator, but differing by about 15 degrees from the longitude which he had assigned to it.

Third voyage

Litke was intrusted with a similar command a third time in 1823, when he ascertained that the promontory which he had imagined to be Barentz's Cape Desire, was in fact his Cape Nassau, and that the description of it given by this celebrated discoverer was quite correct. In the same voyage he had an opportunity of examining the great strait, called Matotchkin Schar, which divides the island into two parts, and found its length to be about 52 English miles.

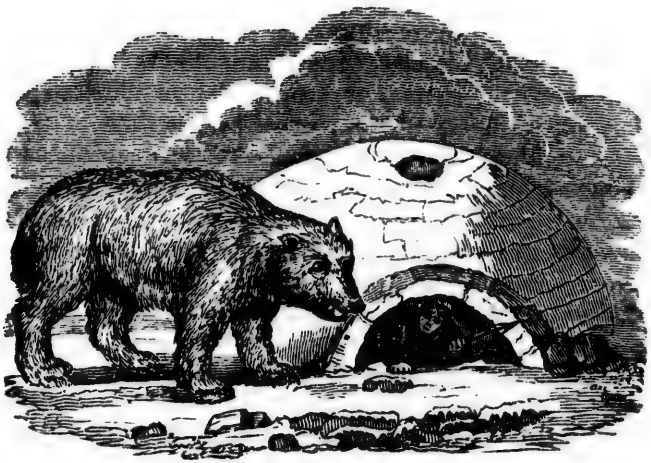
His general conclusions are, that the southern section of the coast is low and flat; but that about lat. 73° there

commences a chain of somewhat lofty mountains, the summits of which are covered with snow. The appearance of the country is dreary and miserable in the extreme; notwithstanding which, the idea entertained by those who consider it as a mere mass of ice, partially sprinked with soil, was found quite erroneous. Captain Litke brought home with him specimens of the different rocks and earths of which it is composed.

Conclusions arrived at.

The same navigator was appointed once more in 1824, with instructions to examine the eastern coast; but in endeavouring to penetrate between Spitzbergen and Nova Zembla he was completely repulsed by the masses of ice with which the sea was encumbered; while his attempt to make a passage by the Strait of Waygatz was equally defeated by contrary winds and calms. Hence, notwithstanding these spirited efforts on the part of the Russian government, no great accession has been made to our knowledge of that insular territory.

Voyage to examine the eastern coast.



CHAPTER V.

Early Voyages towards the North Pole.

Plan of a Polar Passage to India—Voyages to Cherie Island—Hudson—Poole—Baffin—Fotherby.

CHAP. V.

Scheme of a Polar passage.

THE attention of the public, it has appeared, was early drawn towards a Polar passage, which, by striking directly across the Arctic ocean, might bring the navigator by a shorter route than any other to the golden realms of the East. Mr Robert Thorne, a zealous promoter of discovery, in his memorials to Henry VIII. and other great men, always placed foremost the scheme of reaching India by this improved course. It is not wonderful, however, that such a voyage should not have been among the first which were attempted. A century had elapsed from the discovery of the passage by the Cape of Good Hope, and half that period since the commencement of the naval career of Britain, before her seamen, despairing of success by the more circuitous tracks hitherto followed, put forth all their strength to cross the icy waters which surround the northern pole of the earth.

Discovery of Spitzbergen.

Barentz, as already noticed, had in his third voyage discovered Spitzbergen; but it was in pursuit of the fishery that the English were first attracted into the high latitudes of the Greenland or Polar Sea. In 1603, Alderman Sir Francis Cherie of London fitted out the Godspeed, under the command of Stephen Bennet, apparently with the vague idea of exploring the Arctic shores, and ascertaining their sources of commercial wealth. The captain at first followed the beaten track

of the North Cape, Wardhuys, and Kola; after which, reversing his direction, he pushed north and north-west into the ocean. On the 16th August, at two o'clock, he descried two hills which seemed to rise above the clouds. In four hours he reached the Bear Island of Barentry and not having heard, it should seem, of its previous discovery by that navigator, gave to it, in honour of his own employer, the name of Cherie. Here the sailors caught only two foxes and a few fishes; for though they saw the teeth of a morse, proving that those animals did "use there," the season was considered too far advanced to commence operations against them. He directed his course homeward by Kola and the North Cape, and reached the Thames on the 15th October.

Captain Bennet.

Foxes and fishes caught.

Sir Francis, on the return of the ship, though it came empty, was so far satisfied as to send it out next year under the same commander. Bennet, accordingly, not only went out a second time, but made several successive voyages, in which the capture of the morse was carried on with considerable success.

Second voyager.

While these things were going on, Henry Hudson, in 1607, was despatched by the Muscovy Company to penetrate, if possible, directly across the Pole. This bold enterprise had not been before attempted, and it constitutes the first recorded voyage of the eminent navigator to whose skill it was confided. Having sailed on the 1st May, he passed the latitude of Iceland, and took a direction westward, being desirous to survey the northern boundaries of Greenland, thinking there might be an open sea in that direction as likely as in any other. On the 13th June the ships were involved in thick fog, their shrouds and sails being frozen; but, when it cleared next morning, the sailors descried a high and bold headland mostly covered with snow, behind which rose a castellated mountain, named the Mount of God's Mercy. Rain now fell, and the air felt temperate and agreeable. They steered eastward to clear this coast; but, after being for some time enveloped in mists, again saw land, very high and bold, and without snow even on the loftiest

Hudson dispatched by the Muscovy Company.

CHAP. V.

mountains. To this cape, situated in 73°, they gave the name of Hold-with-Hope.

Passing Spitzbergen.

He now took a north-eastward direction, and on the 27th faintly perceived the coast of Spitzbergen. He still pushed northward, till he passed the 79th degree of latitude, where, though the sun at this season did not descend lower than ten degrees above the horizon, the weather was piercingly cold, and the shrouds and sails often frozen. The ice obliged him to steer in various directions; but, embracing every opportunity, he pushed on, as appeared to him, to 81½°, and saw land stretching without interruption as far as 82°. But as the extremity of Spitzbergen does not lie beyond 81°, he must have committed some mistake, either in his latitudes or in mistaking for land extensive fields of ice. It has been supposed that he had again reached the opposite coast of Greenland.

Greenland; but this seems inconsistent with his bearings, which are always more or less to the eastward. The sea, in the latitudes of 81° and 82°, he considers to be so completely barred with ice as certainly to defeat all attempts at a passage to the Pole in this direction; though, in his opinion, it might be frequented with great advantage on account of the immense multitude of seals with which it abounds. He returned, coasting along Spitzbergen, some parts of which appeared very agreeable; and on the 15th September arrived in the Thames.

Enterprise of the Muscovy Company.

The Muscovy Company, still the most enterprising body in England, determined to fit out another expedition for Polar discovery. They intrusted it to Jonas Poole, who had distinguished himself in the Cherie Island voyages; and it was hinted to him, that though discovery was to be his main object, yet he might catch at intervals some morses, and even one or two whales, to make the voyage defray its own expenses. He took his departure in due season, sailing from Blackwall on the 1st March 1610. By the 16th he had reached the coast of Norway, in lat. 65°, but the wind then blew from the north so "extreme fierce, with great store of snow and frost," and the vessel was so laden with ice,

Captain Jonas Poole.

that it could not maintain a "fore course," and was driven back as far as Scotland. Here he remained till the 12th April, when, favoured by a southerly breeze, he again set sail, and after many storms, snows, and extreme frosts, came in view, on the 2d May, of the North Cape. He then steered for Cherie Island, near which he judged himself to be on the 6th; but the fog was such that he could not see a cable's length, and "the ship had many a knock; but, thanks be to God, no harm was done!" Continuing to beat about in this obscurity, he entirely missed his object, and the first land seen by him was in 76° 50′, being the shores of an inlet on the coast of Spitzbergen, which, from the deer's horns found there, he named Horn Sound. He pushed on to 77° 25′, where he found the air more temperate than he had formerly felt it at the North Cape at the same season. Soon, however, there was a complete reverse; the ship was involved in thick fogs,—and wind, frost, snow, and cold, seemed to strive for the mastery. After many a sore stroke he got the vessel through; but the mainsail was still "frozen as hard as ever he found any cloth," and could with great difficulty be set. He discovered an island, which he called Blackpoint, and the nearest promontory he named Cape Cold; but next day the weather changed so entirely that he gave to a similar projection the milder appellation of Fair Foreland. His views continued to brighten, when he found that the sun, as the season advanced, gave a most powerful heat; that the ice was melted on the ponds and lakes; while that which still floated on the sea was not nearly so huge as he had seen it in 73 degrees. He conceived favourable hopes, therefore, even after so sharp a beginning, and judged that a passage by the Pole was as likely to be found in this as in any other meridian. He might therefore have been expected to apply himself in the most zealous and determined manner to make the discovery. A large herd of morses, however, having come in sight, he despatched his crew in pursuit of them; and from this time there is not another word of prose-

Horn Sound

Fair foreland.

Pursuit of morses.

CHAP. V.

Seductiveness of the chase.

cuting the research. The taking of the walrus and the deer, and now and then an attack on the whale, absorbed his whole attention. He met with some dangers. One day he attacked a herd of morses lying on ice, which proved hollow, and suddenly broke, whereon ice and beasts slid into the sea together, and the crew had great difficulty in not going along with them, especially one man; for, besides being crushed by the weight of the carcasses, the animals that were alive struck at him in the water, and severely bruised him. Upon the whole he judged Spitzbergen to be milder than Cherie Island, and was not less surprised at the great number of deer, than at the care of Providence, which enabled them to subsist on so little pasturage, with only the rocks for a house, the starry canopy for a covering, and not a bush or a tree to shelter them from the nipping cold of winter.

Mildness of Spitzbergen

Satisfaction with the voyage.

Although Poole returned from this voyage without having done or almost attempted any thing, yet, as he brought a considerable store of oil and teeth, his employers were not ill satisfied. They fitted him out next year in the Elizabeth of fifty tons, and in their instructions distinctly informed him that discovery was to be his main object; yet intimated, as before, that as he proceeded with the Mary Margaret, destined for the whale-fishery, he might begin by joining her in taking a few whales, and in his course along the coast kill as many morses as might chance to present themselves. Having extracted the oil, he was to floor the hold with their skins, which a tanner had agreed to purchase of the Company; but all this was only to lighten the cost of discovery, and not to be in any degree a primary pursuit.

New expedition planned.

Wreck of the Mary Margaret.

The vessels set sail early in April 1611, but were soon separated by fogs and storms; and when Poole reached the coast of Spitzbergen, he found only three boats escaped from the wreck of the Mary Margaret. In the rest of his proceedings we never hear a single word of discovery; but applying himself most diligently

to the secondary object, by the 3d of August he had accumulated oil, morse-skins, and teeth, to the extent of 29 tons,—a good lading, he observes, for a ship of 50. Accordingly it proved her ruin. As the last package was brought in, she went entirely to one side, and all the skins, which lay loose in the hold, slipping in the same direction, carried her altogether under water. Poole, who sat in the cabin, considered himself as having only the choice of being drowned by remaining, or, in attempting to escape, of being killed by the casks, staves, and divers other things which were traversing the ship in every direction. He chose the latter alternative as the least certain, and, though twice beaten down, was plucked from the jaws of death, being enabled to crawl out with his skull laid open, and his ears, back, and ribs severely bruised. The crew, who all escaped, were taken on board a Hull ship commanded by Thomas Marmaduke, of whom Poole makes many complaints; which Purchas, thinking too diffuse, has omitted. As to Greenland, he observes, in general, that when he first went, the mountains and plains were almost entirely white with snow; afterwards they appeared green with grass and a little moss; but, lastly, the sun with his powerful heat dissolved the ice, and exhaled such a profusion of vapours, that the day differed little from the darkest night elsewhere.

Successful fishery.

Fatal consequences.

Escape of the crew.

He was, nevertheless, sent out a third voyage in 1612, with two vessels, the Whale and the Sea-horse; but he seems on this occasion also to have busied himself solely in the capture of whales, which he killed to the amount of thirteen. No mention is made of anything being either attempted or projected in relation to discovery; though he states that Marmaduke penetrated to the latitude of 82°. No detail, however, is given, nor have we any narrative from that captain himself; which is to be regretted, as he seems to have been more deeply imbued with the spirit of research than any other mariner of that time.

Third voyage.

The next expedition took place in 1613, under

CHAP. V.

William Baffin.

William Baffin, the most learned navigator of the age, and one of the greatest names in northern adventure. It was not, however, by this voyage that he obtained his reputation, though he was provided with six good and well-armed ships; the object of it appearing to have been little else than to chase from the Greenland seas all other vessels that might attempt to use them for fishery. Their practice was, whenever they fell in with a foreigner, to summon the master on board, show the king's commission granted to the worshipful Company, and desire him to depart, on pain of having a cannonade immediately opened upon him. The strength of the English being in general decidedly superior to that of any other squadron in those seas, these terms were usually acceded to without opposition. At one time, indeed, five vessels, Dutch and French, including a large one of 700 tons from Biscay, mustered, and showed signs of offering battle; but the Spaniard having lost courage and yielded, the rest were obliged to follow his example. On another occasion a Dutchman having refused, and endeavoured to make off, so brisk a fire was opened upon him, that he had nearly run on shore, and was fain to submit. A considerable number of English sailors seem to have been on board these foreign ships, who were all forcibly taken out. It seems difficult to discover on what ground the subjects of King James attempted to establish their right to these coasts, since they had neither been the first discoverers, nor held them in any sort of occupation. In fact, they were not able ultimately to make good the pretensions which they urged in so violent a manner.

Oppressive interference.

Unreasonable proceedings.

Neglect of discovery.

There is no mention of any effort on the part of Baffin for the purpose of discovery. On the contrary, Marmaduke, who had again endeavoured to penetrate to the north of Spitzbergen, was chidden for having thereby hindered the voyage, and was prohibited from any farther attempts of the kind during the season. The former, however, made some curious observations on the effects of refraction in high northern latitudes.

CHAP. V.

Captain Robert Fotherby.

The Company still did not consider the question of a northern passage decided, as, indeed, since the time of Hudson, it could not be said to have been seriously attempted. In 1614 they appointed Robert Fotherby, in the Thomasine, to accompany their Greenland fleet of ten ships and two pinnaces, with instructions, while the rest were fishing, to devote himself mainly to discovery. Baffin accompanied him as pilot. After considerable obstructions, eleven vessels being at one time fast among the ice, the captain, by the 6th of June, pushed on to Hakluyt's Headland. He endeavoured to penetrate through Magdalena Bay, which he calls Maudlen Sound; but the weather was foul, and the ice lay unbroken from shore to shore. On the 10th he stood farther out, and succeeded in passing to the north of the headland, when he again encountered an impenetrable barrier. He then steered westward, in hopes of discovering a more favourable opening; but the ice trending south-west, he sailed twenty-eight leagues without success, and then returned to the Foreland. About the middle of July, the air becoming clear and favourable, he and Baffin ascended a high hill, to see what prospect there was of getting forward; but as far as they could discern, ice lay upon the sea, which indeed seemed wholly "bound with ice," though in the extreme distance there was an appearance of open water, that inspired some hope. After amusing themselves for some days killing whales, they again mounted a very lofty eminence, from which they saw an extensive channel, but much impeded with ice. This was Sir Thomas Smith's Sound, which they afterwards ascended to its head, and found a good harbour, very advantageously situated for the whale-fishery.

Course pursued.

Whale fishing.

Perseverance.

It was now the 9th of August, and Fotherby saw two Dutch ships, which had been sent out for northern discovery, making their way homeward, after relinquishing the undertaking in despair; but he was determined not to be baffled in his attempt without some farther struggle. He pushed towards the north from Cape

CHAP. V.

Interruption from ice.

Barren, and had made twenty-four leagues, when he again met the ice. He coasted along it two days, hoping to find an opening among its shattered fragments; but a north wind sprang up, with heavy snow, and every thing being cold, thick, and winter-like, he was forced once more into harbour. The shore and hill being now covered with snow, the crew were seized with the desire of returning to England; but the captain was still unwilling to depart without some farther satisfaction. He went in a boat up Redcliffe Sound, and though ice was newly formed upon it, of about the thickness of a half-crown piece, he pierced through, and got into open water. The snow, however, continued to fall thick, and the east wind blew in the ice so forcibly, that he was glad to return to the ship. Passing a point, it was observed that a cross which our countrymen had erected, with the king's arms and a sixpence nailed upon it, had been taken down, "sixpence and all," by the Dutch, and Prince Maurice's arms substituted; this grievance, however, was speedily redressed.

Singular grievance.

South-west gale.

About the end of August a gale sprang up from the south-west, and brought milder weather than at any former period of the season; and the strength of the thaw was proved by huge masses falling from the snowy banks into the sea with a sound like that of thunder. Conceiving better hopes, the navigator pushed out again, in a north-west direction, till he came nearly to the latitude of 80°, when he heard a mighty noise of the waves, as it were, breaking on an extensive shore. It proved, however, that he was now on the margin of the great northern ice. He coasted for some time along that grand barrier; but was soon embayed, whence it was not without difficulty that he extricated himself. The season advancing, he took the benefit of a fair wind to steer homewards, and on the 4th October arrived at Wapping, with his whole crew of twenty-six men in perfect health.

Return.

Fotherby, having recommended himself on this voyage by spirit and diligence, was sent out next year

CHAP. V

(1615) by the worshipful Company, in the Richard, a pinnace of only twenty tons. After many conflicts with ice and fog, he reached Hakluyt's Headland about the beginning of July. He forthwith began his career of discovery; but a strong southerly gale driving him upon the ice, shattered his bark considerably, and obliged him to return. As soon as his vessel was refitted, he endeavoured, by a westerly course, to find an opening among the ice, which projected in various points and capes, but remained still fixed, and he found himself pushed by it southwards to the latitude of 76°. However, he sailed still farther west, towards what he thought should have been the southern part of Hudson's Greenland; and seafowls in vast flocks seemed to indicate land, but the fog lay so thick, "that he might easier hear land than see it." When about lat. 71½°, the air cleared, and he descried a snowy hill very high amid the clouds, while the fog lying on each side made it appear like a great continent. It proved, however, to be only an island, probably Jan Mayen; and as the shores presented nothing but drift-wood, and appeared as if fortified with castles and bulwarks of rock, no shelter was afforded from a heavy gale which began to blow. This induced him to stand out to sea, when he regained the northern point of Spitzbergen, and began to beat for a Polar passage. The wind, however, blew so strong from the north-north-east, that he gave up the attempt, only resolving, on his way home, to take a survey of Hudson's Hold-with-Hope. He came to the place where it ought to have been, but finding no land, he insisted that his predecessor must have been mistaken in the position assigned to it,—a suspicion which has been recently confirmed by Mr Scoresby. Availing himself then of a brisk northerly breeze, he shaped his course for England.

Second voyage of Fotherby.

Jan Mayen island.

Return to England.

Fotherby, on being asked his opinion as to the probability of a passage through the Arctic Ocean, replied, that though he had not attained in this respect his desire, nothing yet appeared to exclude hope. There was,

CHAP. V.

Continued hopes of success.

he remarked, a spacious sea between Greenland and Spitzbergen, though much pestered with ice; and therefore he would not dissuade the worshipful Company from a yearly adventure of £150, or £200 at the most. The little pinnace, with ten men, in which he had sailed two thousand leagues, appeared to him more convenient for that purpose than vessels of larger dimensions. A very long period, however, elapsed before any attempt of this nature was resumed.

CHAPTER VI.

Early Voyages in Search of a North-west Passage.

The Portuguese; The Cortereales—The Spaniards; Gomez—Expeditions under Henry VIII.; their Issue—Frobisher's First, Second, and Third Voyages—Davis' First, Second, and Third Voyages—Weymouth—Knight—Hudson; Mutiny of his Men; Disastrous Issue of the Expedition—Voyages of Button—Gibbons—Bylot—Baffin—Jens Munk, the Dane—Fox and James—Knight and Barlow—Middleton, &c.

CHAP. VI.

Favour for the North-west passage

NOTWITHSTANDING the repeated efforts to find a passage by the east and north-east, the west finally became the scene of the grandest naval enterprises, and flattered the nation longest with the hope of this signal discovery. The maritime world were not yet aware of the immense breadth of America at its northern limit. That continent was imagined to terminate in a cape, after rounding which, and passing through the Strait of Anian,—an imaginary channel, supposed by the early geographers to separate America from Asia,—an entrance would be opened at once into the Pacific, in which the navigator might proceed full sail to Japan, China, the Spice Islands, and all the other regions abounding in Oriental wealth.

Portuguese enterprise.

Of the European nations, Portugal was the first to embark in the career of ocean-discovery. Her monarchs and nobles employed their utmost exertions to double the southern point of Africa, and thereby to overcome the obstacles opposed by that continent to a direct commerce with India. Their efforts were crowned with

CHAP. VI.

Cortereal's enthusiasm

success; and the passage by the Cape would have been the most brilliant exploit ever performed, had it not been rivalled by the contemporaneous discovery of America. Enough might seem to have been done, both for the benefit and the glory of the nation, without directing their efforts into any other channel; yet one of the most illustrious houses of that kingdom, with much enthusiasm and no small loss, devoted itself to western navigation. We allude to that of Cortereal; for a

Claims of John Vaz.

member of which, named John Vaz, claims, though somewhat doubtful, have been advanced for the honour of having reached the shores of Newfoundland some time before the celebrated voyages of Columbus or Cabot. In 1500, his son Gaspar, immediately upon hearing of the successful labours of the former of these com-

Gaspar Cortereal.

manders, resolved to follow his steps. Having obtained from the king two vessels, he touched at Terceira, one of the Azores, and proceeded in a north-west direction, endeavouring to find his way to India by some of the higher latitudes. Respecting the details of this voyage there remain only detached notices, which Mr Barrow has collected with his usual learning and diligence. He reached the coast of America about the parallel of 50°, probably on the northern shore of Newfoundland, where he found a bay containing numerous islands which he calls the Golfo Quadrado,—conjectured to be the Straits of Belleisle. He then steered northwards, and passed

Reaching the coast of Labrador.

along a coast which Europeans have since commonly called Labrador, but which in the early maps bears from him the name of *Cortereälis*. In some of the narratives it is designated *Terra Verde* (Greenland), but it has nothing in common with the country to which Europeans have still more improperly affixed that appellation. The territory is represented as amply stocked with timber,—a description which applies to the spacious forests of fir and pine that clothe the region contiguous to Canada on the north. The natives are correctly described as a mild and laborious race;—and no less than fifty-seven being allured or carried on

board, were conveyed to Portugal. After a run along this shore, estimated at about 700 miles, Cortereal came to a point which seemed to preclude all farther progress. Ramusio, indeed, states that the highest latitude he attained was only 60°, which would coincide nearly with the entrances into Hudson's Bay. But the season was now somewhat advanced; and the approach of the Polar winter, the floating mountains of ice, the thick snows which filled the air,—the gloomy characteristics of an Arctic climate,—must, to a crew accustomed to warm and temperate seas, have appeared peculiarly terrible. It was therefore judged absolutely necessary to return home, and Cortereal arrived at Lisbon on the 8th October 1501.* That this necessity, however, was con-

Highest latitude attained.

Terrible aspect of the northern winter.

* The view here taken of Cortereal's voyage, as extending along the coast of Labrador, has been lately contested, and even treated as an "absurd hypothesis," by the anonymous author of "A Memoir of Sebastian Cabot." He maintains that the most northern point reached by that navigator was in the Gulf of St Lawrence, or at farthest the southern extremity of Labrador. This question, relating to one of the most illustrious martyrs in the cause of early discovery, seems to merit some attention. It may be premised, that this hypothesis can with no propriety be called *ours*, since it is the general belief of modern geographers, expressed by the very names of *Cortereali*s and *Labrador*, always applied to this coast. Doubtless it was perfectly open for the author, if he could, to disprove this opinion and establish his own; but it is conceived that a very few observations, founded in a great measure on documents produced by himself, will prove it to be palpably erroneous.

First, The voyage is allowed on all hands to have been directed towards the north, and with a view to northern discovery. But as the objects lay westward, the direction would of course be modified accordingly, and we may accept the statement of the Italian ambassador, that it was *tra maestro e ponente* (between north-west and west). But such a course, either from Lisbon or Terceira, could scarcely be compatible with his reaching any point south of the St Lawrence, certainly not one which would admit of 600 or 700 miles of northerly navigation before reaching that river. By supposing one degree of northern for every four of western sailing, we should make him reach America in about the latitude of 50 degrees, which would place him on the northern coast of Newfoundland.

Second, The mild and laborious character ascribed to the natives (*molto mansueti—excellentia da fatiga*), presents the most striking contrast to the fierce and proud indolence of the

CHAP. VI.

Undaunted courage.

sidered to arise from the season only, and that no panic was struck into the mind of this intrepid navigator, was

North American Indians; it applies exclusively to the Esquimaux tribes. The habit of subsisting almost wholly on fish, the clothing formed almost entirely of seal-skin, the roofing of the huts with skins of fishes, are features which, occurring to such an extent, become strikingly characteristic of shores inhabited by Esquimaux.

These two first observations concur to render our conclusion highly probable; the *third* seems to remove every shadow of doubt. After sailing along this coast six or seven hundred miles, the navigator was arrested by a frozen sea and prodigious falls of snow (*mare agliazato e infinita copia de neve*); he then sailed homewards, and arrived at Lisbon on the 8th of October. Hence the above phenomena, marking the setting in of the utmost severity of an Arctic winter, must have presented themselves not later than the middle of September. Surely no one at all acquainted with the phenomena of climate can concur with the author of the Memoir in the supposition that at that season the expedition could be arrested, in the manner above described, in the Gulf of St Lawrence.

Respecting the latitude reached by Cortereal, there occur two different statements. Some make it 50°, others 60°. The author zealously adopts the former, considering it as the ultimate point reached by that navigator. So anxious is he to accumulate authorities upon this head, that he quotes first *Gomara* and then *Fumée*, as if they had been separate authors, although he knows the one to be only the translator of the other. The truth is, there is not the slightest discrepancy between the statements. There are two positions to be considered; that at which Cortereal first touched the American coast; and the one where, after sailing 600 or 700 miles, he terminated his coasting-voyage. The latitude of 50° seems evidently to correspond to the first point, where he found the *Golfo Quadrado*, the extensive pine-forests, and the country wearing a smiling aspect. The very expression of Galvano, that "he sailed *into* that climate which standeth under the north in 50 degrees," clearly implies this as the latitude at which America was reached; and this, as already observed, agrees exactly with the direction in which Cortereal sailed from Portugal. The latitude of 60° again appears as clearly to be the most northern point, where his progress was arrested by the frozen sea, and the air filled with wintry tempests; and it is remarkable, that ten degrees, the difference between these two latitudes, corresponds exactly with the space of 600 or 700 miles, which he is represented to have sailed along the American coast.

The only feature that seems at all to support our author's hypothesis, and on which indeed he seems to place his sole reliance, is the verdant and smiling aspect which the navigators

sufficiently testified by his appearing on the sea next season with two vessels, which he steered directly to the most northerly point attained in the former voyage. Here he is described as entering a strait, Hudson's perhaps, or more probably Frobisher's; but at this critical moment the two ships were separated by a tempest, amid the floating ice with which these narrows are infested. One of them succeeded in extricating itself, and searched for some time in vain for its consort; but this last, which had on board the gallant leader of the expedition, was seen no more, and no intelligence could ever be obtained of its fate.*

Fresh attempt.

Loss of one of the ships

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ascribed to this region. This does not exactly correspond with our ideas on the subject; but the truth is, that certain tracts wholly uncultivated, even in the neighbourhood of the Arctic circle, exhibit, when arrayed in their summer robe, an appearance peculiarly pleasing. The varied vegetation, the profusion of wild flowers, and the bushes loaded with delicious berries, compose a gayer scene than is displayed on more southern shores that are covered with the dark luxuriance of tropical foliage.

* We consider it a somewhat hasty conclusion formed by the author of the Memoir of Cabot, that it "cannot be doubted that the objects of Cortereal's second voyage were timber and slaves." This seems to harmonize very ill with the character of the navigator, and the lofty spirit of Emanuel, by whom he was employed. These objects appear, indeed, from the letter of a Venetian ambassador, to have been mentioned, but chiefly, we suspect, to satisfy that class of persons who considered mercantile profit as the only legitimate object of maritime discovery. Osorio, a very eminent Portuguese historian, who wrote the history of Emanuel's reign under the sanction of one of his sons, gives a very opposite view of the motives of Cortereal. He says, in regard to the first voyage, "Gloriæ cupiditate vehementer incensus, ad sui nominis memoriam posteris aliquo facto memorabili prodendam pertinere arbitratus est." (Powerfully inflamed by the desire of glory, he thought it concerned him to transmit his name to posterity by some memorable exploit.) With regard to the second voyage, the observation is:—"Cùm ad spem multò plura cognoscendi raperetur—ut latiùs littora illius omnia pervagaretur, et gentis mores et instituta perdisceret." (Being urged by the hope of obtaining more extensive knowledge—that he might traverse more widely all the shores of that country, and might learn thoroughly the manners and customs of the people.)—*De Rebus Emanuelis*, &c., 63.

CHAP. VI.

Miguel Cortereal.

When these gloomy tidings were conveyed to Portugal, Miguel Cortereal, a younger brother, animated with the most tender affection for Gaspar, and with a congenial spirit of enterprise, determined to put to sea in search of him. Having equipped three vessels, he sailed on the 10th May 1502 from the port of Lisbon. On arriving at the numerous openings into Hudson's Bay, the captains adopted the plan of exploring separately the various inlets. This, however promising in some respects, was an imprudent step; for nothing could have conduced more to their mutual safety than to keep close together, and be ready to aid each other in those dreadful exigencies to which this navigation is liable. It proved a fatal measure; two of them, indeed, met and returned; but Miguel and his crew shared the fate of those whom they had gone to seek; and it was never known where or how they perished. The survivors reported at Lisbon this heavy aggravation of the former distress. Fraternal affection and daring courage seem to have characterized the whole of this noble race. There was still a third brother, Vasco Eanes, who besought of the king permission to search for his lost kindred amid the abysses of the northern ocean; but on this project a royal veto was absolutely imposed; his majesty declaring that it was more than enough to have lost in this cause two of his best and most faithful servants. After a commencement so gloomy, and such gallant efforts made in vain, it does not appear that the project of effecting a passage in the Arctic sea was ever revived in Portugal.

Arrival at the mouth of Hudson's Bay.

Vasco Eanes

Inertness of Spain

Spain, which had made the discovery of America, and from that success derived so much glory and wealth, might have been expected to take a deep interest in every thing connected with its farther exploration. The fact, however, appears to be, that revelling amidst the rich plains and glittering treasures of Mexico and Peru, she felt little attraction towards the bleak confines of the Northern Pole. Only one

voyage is mentioned, that, namely, which was undertaken in 1524 by Gomez, with the view of seeking a shorter passage to the Moluccas. He is understood to have touched at Newfoundland, sailed along the coast of New England as far as the 40th degree of latitude, and returned, after a voyage of ten months, bringing with him a few of the natives, but without making any material addition to the information collected by Cabot.

Voyage of Gomez.

Britain at last assumed the task of discovery, and made it almost exclusively her own. Her efforts, indeed, were long in vain;—the barriers of nature were too mighty;—and America, stretching her shores into regions that lie beneath the perpetual sweep of the northern tempest, renders navigation precarious and doubtful. More recently, however, she has earned high glory in this career; she has formed in it some of her greatest naval commanders; has opened new channels for the whale-fishery; fixed the limits of the western continent; and explored the wide seas and large islands which range along its remotest shores.

British enterprise.

But even in this country there was a long interruption in maritime discovery. Henry VIII., as we formerly observed, showed from his accession almost an entire absence of the zeal manifested by his predecessor; and Sebastian Cabot, who had earned perhaps the highest name in Europe for naval skill and enterprise, finding no encouragement, resolved to transfer his services to the court of Spain. Amid this neglect, however, he seems to have preserved the strongest attachment to his native country. He repaired thither in 1517, and prevailed upon the king to fit out an expedition with the usual object of discovering a new route to the East. Unfortunately the command was intrusted, not to Cabot himself, the early and able leader of such expeditions, but to Sir Thomas Pert, who though he held the high rank of vice-admiral of England, seems to have been destitute of the qualities requisite for this arduous field of enterprise. The

Indifference of Henry VIII.

Sebastian Cabot.

Sir Thomas Pert.

CHAP. VI.

Course explored.

other was allowed to act only as his pilot; yet in this capacity he guided the vessel, according to his own statement in a letter to Ramusio, to the latitude of 67½° N.; and the researches of the author of "A Memoir of Sebastian Cabot" have even given reason to conclude that he actually entered Hudson's Bay, and was ascending what has since been called the Fox Channel. He considered the voyage so far as having been quite prosperous, and declares that he both could and would have gone to Cataia (China); but the courage of the commander, as well as of the crew, appears to have failed, and they refused to proceed any farther. By the unsuccessful issue of this voyage, the monarch seems to have been confirmed in his previous indifference to discovery. Cabot was again obliged to have recourse to Spain, and was soon after created grand pilot of that kingdom; nor did he return to England till the period of Henry's death.

Remonstrance of Mr. Thorne of Bristol.

Ten years after this failure, his majesty, urged by a strong representation on the part of Mr Thorne of Bristol, who seems to hint that on account of his apathy on this subject he was unworthy to reign, was induced to fit out another expedition for the same object. The records of it are most imperfect; though the author of the "Memoir" has found that the names of the vessels were the Mary and the Sampson, and that they reached the latitude of 53° N.; but, having probably set out too early in the season, they were arrested there by ice and snow, and turned to the southward. One of them appears afterwards to have touched at Porto Rico.

Mr. Hore of London

This undertaking was followed, at the distance of nine years, by another, which was set on foot by Mr Hore of London, a wealthy individual, who easily induced thirty young gentlemen of family and fortune, some of whom were from the Inns of Court, to embark along with him. In this case also Hakluyt had to lament the absence of written records; but he found out Mr Oliver Dawbeny, who sailed in one of the

vessels; and having learned that a son of Sir William Buts of Norfolk had been of the party, and was still alive, he rode two hundred miles for the purpose of conversing with that gentleman. From these sources he was informed that the band of volunteers mustered in military array at Gravesend, and, having taken the sacrament, went on board. They had a long and tedious voyage, during which their buoyant spirits considerably flagged. At the end of two months they reached Cape Breton, then held as part of the West Indies; whence, in fulfilment of their views, they endeavoured to shape a more northerly course. They reached Penguin Island, the same probably since called Birds' Island, abounding in fowls as large as a goose, and even in bears, which made such tolerable food that all their wants were supplied. Having proceeded to Newfoundland, Dawbeny one day called on his comrades to come and view a boat with the "natural people of the country," whom they had earnestly desired to see. A barge was fitted out to treat with them; but the savages, alarmed, fled precipitately, relinquishing the side of a bear which they had been roasting; and all attempts to overtake them were fruitless. The country, indeed, appears to have been singularly barren and desolate. Food, it was said, could be procured only by purloining from the nest of an ospray the fish collected for her young. It seems strange that they should have remained on this shore, where famine soon rose to such a pitch as to drive them to a most frightful extremity. Several of them waylaid a companion, killed him, and deposited his flesh in a secret place, to which they repaired, and having roasted it in successive portions, eagerly fed upon it. An accident betrayed this dreadful secret. One of the crew, walking with a comrade who had shared in the cannibal feast, smelt the savour of broiled meat, and reproached him with keeping a private hoard, while others were in such fearful want. They came to high words, when the guilty person said,

Source of information.

Cape Breton.

Newfoundland.

Dreadful scarcity of food.

CHAP. VI

Remonstrance of the captain.

"Well, if you will have it, it is a piece of ———'s flesh." This being reported to the captain, he called together the ship's company; and solemnly representing to them the dreadful crime they had committed, obtained a promise that it should be carried no farther. The famine, however, becoming always more pressing, they were at length driven to the necessity of pursuing this horrible expedient systematically, and had arranged the casting of lots to decide whose life should be sacrificed to save the rest, when a French ship appeared in view. Finding it to be well stored with provisions, they scrupled not to attack and seize it, recommending the ejected crew to the ill-provided bark which they themselves had left. They made their way in all haste home, which they reached in the most squalid and miserable state. So changed was young Buts that neither Sir William nor his mother could recognise him, till he displayed a secret mark which proved him to be their son. Meantime the Frenchmen arrived in their own country, and raised loud complaints against the cruel and unwarrantable manner in which they had been treated. Henry, unable to deny the extreme hardship of their case, yet moved with pity towards his own subjects, whom he was unwilling to punish, liberally paid from his private purse the full extent of the loss.

Capture of a French vessel

Complaint of the Frenchmen.

Want of skill shown.

From so slight a narrative it were rash to form any very positive conclusion; yet we cannot help observing, that there is little appearance of the adventurers having gone out duly prepared for their arduous undertaking, and little display of nautical skill, prudence, or good conduct, in the whole of the expedition.

Abandonment of the western exploration.

After so disastrous an issue, the spirit of western discovery slumbered. The great zeal kindled in the succeeding reign of Edward VI. turned wholly to the eastward, producing the voyages of Sir Hugh Willoughby and others, which have been recorded in a former chapter. It was otherwise during the government of Queen Elizabeth; though that princess, however much

inclined to favour whatever might contribute to the glory and interests of her kingdom, did not originate any of these schemes. Sir Humphrey Gilbert and Mr Richard Willis wrote treatises, where learned observations were combined with fanciful reasonings and erroneous reports; but all calculated to influence the public mind in support of such undertakings. The first voyage was planned and conducted by Martin Frobisher, an officer who afterwards distinguished himself by naval exploits in every quarter of the globe, but who earned his early fame by contending with the snows and tempests of the northern deep. Regarding the western passage as the only great thing in the world still left undone, he solicited during fifteen years, in city and court, the means of equipping a small flotilla capable of accomplishing this important object. The mercantile bodies manifested a coldness very unlike the ardour displayed on former occasions; but some influential persons proved at length more favourable, and, through the interest of the Earl of Warwick, he was enabled, in the year 1576, to fit out three vessels, respectively of 35, 30, and 10 tons. These little barks, or rather boats, seemed ill fitted for navigating the Arctic deep; yet Mr Scoresby has observed, that such vessels are better calculated for threading their way through channels obstructed by ice, and even for withstanding somewhat rude shocks from it, than larger and more unwieldy fabrics.

Treatises of Gilbert and Willis.

Martin Frobisher.

Interest of the Earl of Warwick.

Frobisher, on the 8th June, dropped down from Deptford to Greenwich, where the court then resided, and, in passing the palace, fired a round in his best style. The queen looked from the windows, cheering and waving her hand, and Secretary Walsingham went on board, wished the captain success, and exhorted the crews to good order and obedience. Having on the 19th reached Yarmouth, he thence stood out to sea, and on the 26th saw before him Sumburgh Head, a bold promontory in Shetland, while he had Fair Isle to the north-west. In the remainder of his course, he only gives his distances, latitudes, and directions. On the

Departure of Frobisher.

CHAP. VI.

First sight of Greenland.

11th July he saw a range of precipitous summits which, even in the height of summer, were all white with snow. He concluded this coast to be the Friesland of Zeno, but in fact it was the southern point of Greenland, near Cape Farewell. A boat put out towards the coast, but found it so barred with ice and obscured by fog that it was impossible to land. The navigators now steered westward, suffering severely from northerly gales. On the 14th the wind shattered their fore-yard, and bore the mizzenmast overboard; and on the 16th the topmast with its sail broke off, and fell into the sea. They continued, however, to press on; and upon the

Stopped by the ice.

22d a thick mist dispersing, showed a long line of coast, conjectured to be Labrador. Ice, however, formed an impassable barrier between them and the land, while the lead went down 100 fathoms without touching the ground. The current was very strong, but from the impossibility of coming to anchor, could not be measured; yet it seemed not less than a league and a half an hour. On the 1st August the discoverers approached to make observations on a large island of ice, which, as they were viewing it, went to pieces, and fell into the sea with a tremendous crash.

Interview with the natives.

Having on the 18th reached a more accessible coast, they were desirous to ascertain if it was inhabited. Seeing seven boats plying along the beach, they sent out one of their own, the crew of which, by holding up a white cloth, induced a canoe to approach; but on seeing the ship the natives immediately turned back. Frobisher then went on shore, and, by the distribution of several little presents, enticed one of them to come on board. This person being well treated with meat and drink, made when he landed so favourable a report that

Appearance.

nineteen followed his example. The sailors had then a full opportunity of observing this Esquimaux race. They are described as "like to Tartars, with long black hair, broad faces, and flat noses, having boats of seal-skin, with a keel of wood within the skin." Next day they appeared more shy, and with some difficulty one of them,

by the allurement of a bell, was drawn on board. The captain, having no intention to detain him, sent a boat with five men to put him on shore at the angle of a rock; but these, urged by curiosity and blinded by false confidence, went on to join the main body of the natives —a fatal step; they were never allowed to return Frobisher spent two days firing guns, and making inquiries at every point, but without success.

Loss of five men.

On the 26th August, without any very particular reason assigned, the navigator turned his face towards home, and reached Harwich in the beginning of October. He had made little progress towards a western passage; yet, having with such slender means penetrated thus far and discovered a new country, dignified with the title of Meta Incognita, his voyage was considered highly creditable, and as affording good promise for the future. The public interest was excited by another circumstance of a very illusory nature. All his friends importuned him to give them something or other which had come from Meta Incognita. At a loss to satisfy this desire, he cast his eyes on a large stone which, from its glittering appearance, he had been induced to take on board. He broke it into pieces, and distributed them among the circle of his acquaintances. One portion was received by a lady, who happened to drop it into the fire, where, after burning for some time, it appeared to glitter like gold. Being thereupon submitted to the goldsmiths, they were so ignorant, or so misled by the enthusiasm of the moment, as to pronounce it a valuable ore of the most precious of metals. This false decision threw all England into a ferment of joy. There was no difficulty now in equipping an expedition. The queen contributed the ship Ayde of 180 tons, besides means for enabling Frobisher to fit out two other vessels, the Michael and Gabriel, of 30 tons each. Being invited to visit the queen at Lord Warwick's seat in Essex, he was allowed to kiss her majesty's hand, and heard from her lips many gracious expressions.

Return home.

Meta Incognita.

False hopes.

He sailed again on the 26th May 1577, with such a

CHAP. VI. Second voyage.

"merrie wind" that on the 8th June he touched at the Orkneys for fresh water, allowing his gentlemen and soldiers to go on shore for recreation. The poor inhabitants, having, it is probable, suffered from the inroads of pirates, fled from their houses with cries and shrieks; but were soon, by courteous treatment, induced to return. Their accommodations were found truly miserable; they had no chimneys in their houses, the fire being placed in the middle of the floor, the one side of which was occupied by the family, and the other by the cattle, while oat-cakes and ewe-milk were their only food. The discoverers now entered on their perilous voyage through the Northern Ocean, during which they were much cheered with the perpetual light, as it allowed them at all hours to read or otherwise amuse themselves; which, it is observed, is peculiarly agreeable to such as "wander in unknown seas and long navigations, where both the winds and raging surges do pass their common course." They were surprised to see large fir-trees, torn up by the roots, floating in the midst of the waves. On the 4th July, Friesland presented its awful front, a range of inaccessible mountains entirely covered with snow, unless where, from the extreme steepness of the cliffs, it had broken off and fallen into the sea. During four days' sail they saw, whenever the thick fogs dispersed, a coast equally dreary, without any landing-place, and without a sign of human habitation or even of life; yet little birds, apparently bewildered in the mist, came and alighted on board, and gave the impression that there might be a milder region in the interior. But the inexperienced part of the crew were especially struck by the islands of ice, rising thirty or forty fathoms above the water, and rooted at the bottom, which the line could not reach.

Continuous light.

Friesland.

Labrador.

Frobisher now sailed across to Labrador, and touched at a sound which received his name. The coast, however, was found guarded by a mighty wall of ice, which the ships could not penetrate; though the captain, with two of his boats, succeeded in working his way into the

strait, and began to survey the country. So crude were then the ideas of seamen respecting the geography of these regions, that they imagined the shore on their left to be America, and that on their right to be Asia. Landing on the former they scrambled to the top of a hill, and erected a column, which, after the great patron of the expedition, was called Mount Warwick. On their return cries were heard like the lowing of bulls, and a large body of natives ran up to them with an air of cordiality and confidence. They entered eagerly into traffic for the trifling ornaments displayed by their visiters, yet declined every invitation to go on board; while the English, on the other hand, did not choose to accede to their proposal of going into the country. Frobisher and one of his people meeting two of the natives apart, rashly attempted to drag them to the boats, hoping there to gain their friendship by presents and good usage. On the slippery ground, however, their feet gave way, the Esquimaux broke loose, and found behind a rock their bows and arrows, which they began to discharge with great fury. The captain and his companion, seized with a panic scarcely justified by two such miserable assailants, fled full speed, and the former reached the barge with an arrow sticking in his leg. The crew, imagining that something serious must have happened to their commander, gave the alarm, and ran to the rescue. The two barbarians instantly retreated; but Nicholas Conger, a stout fellow, servant to Lord Warwick, seized one of them and dragged him into the boat.

Crude notions of the seamen.

Mount Warwick.

Attack of the natives.

Meantime the ships outside were involved in a dreadful tempest, being tossed amid those tremendous ice-islands, the smallest of which would have been sufficient to have crushed them into a thousand pieces. To avoid dangers which so closely beset them, they were obliged to tack fourteen times in four hours; but with the benefit of constant light, the skill of their steersman, and the aid of Providence, they weathered the storm without being compelled to drive out to sea and abandon

Tempest.

CHAP. VI.

Mistaken discovery.

their friends ashore. On the 19th Frobisher went aboard, carrying with him a large store of glittering stone; upon which, says Dionise Little, "we were all rapt with joy, forgetting both where we were and what we had suffered. Behold," says he, "the glory of man,—to-night looking for death, to-morrow devising how to satisfy his greedy appetite with gold."

Effects of a north-west gale.

A north-west gale soon sprung up; before which, like magic, the mighty barriers of ice by which they had been shut out from the land melted away. They had now a broad and open passage, whereby they entered the Sound, which, in their imagination, was still identified with a strait leading into the Pacific Ocean. In a run of more than thirty leagues they landed at different points, and, mounting to the tops of hills, took possession of the country, with solemn ceremonies, in name of her majesty. Having found in one place a bridle of singular construction, they examined their captive upon it, who thereupon seized a dog, attached the bridle, yoked the animal in a sledge, and exhibited the Esquimaux mode of driving. This person admitted that he was not entirely ignorant respecting the five men captured the preceding year, but repelled most strenuously the insinuation that they had been killed and eaten. However, a dark source of suspicion was soon opened; for in some of their boats were found, along with bones of dogs, flesh of unknown animals, and other strange things, an English canvass doublet, a shirt, a girdle, three shoes for contrary feet,—apparel which, beyond all doubt, belonged to their lost countrymen. Anxiously hoping to recover them, they left a letter in the boat, and pen, ink, and paper, with which to return an answer. With the same view, still more vigorous measures were adopted. Forty men, under Charles Jackman, marched inland to take the natives in the rear, and drive them upon the coast, where Frobisher with a party waited to intercept them. The savages, meanwhile, had removed their tents into the interior; but the invaders, after proceeding over several moun-

Suspicions entertained.

Attack on the natives.

tains, descried another cluster of huts, supposed at first to belong to a different horde. The agitation and alarm, however, which were visible the instant our countrymen were observed, showed that this was the guilty band; and, accordingly, hastening to their canoes, and pushing out full speed to sea, they rowed with a rapidity which would have baffled all pursuit, had not the captain with his boats held the entrance of the sound. As soon as they saw themselves thus beset, they landed among the rocks, abandoning their skiffs, which they hoped to render useless by breaking the oars. The English immediately rushed to the assault; while the natives stationed on the rocks resisted the landing, and stood their ground with the most desperate valour. Overwhelmed with clouds of arrows, they picked them up, plucking them even out of their bodies, and returned them with fury. On feeling themselves mortally wounded, they plunged into the sea, lest they should fall into the hands of the conquerors. At length, completely worsted, and having lost five or six of their number, they sprang up among the cliffs and eluded pursuit. There fell into the hands of the assailants only two females, who caused some speculation. One was stricken in years, and presented a visage so singularly frightful as to suggest to some of the crew the uncomfortable suspicion that the great enemy of mankind stood before them in person. This impression gaining ground, it was resolved to ascertain whether or not she possessed the cloven foot. Her buskins were plucked off, to satisfy the credulous sailors as to the fact whether she did not present that peculiar structure of the lower extremities supposed to characterize the dread foe of the human race. As this essential mark was found wanting, it was instantly determined, by liberating her, to deliver their eyes from so hideous a spectacle. The other female was young, with a child in her arms; and being, from her peculiar costume, mistaken for a man, had been fired at and the infant wounded. It was in vain to apply remedies; she licked

Alarm.

Assault of the natives.

Native females

Young female

CHAP. VI

Attachment of natives.

off with her tongue the dressings and salves, and cure it in her own way. She and the male captive formerly taken looked strange at first; but on becoming intimate, found much comfort in each other's society, and showed a strong mutual attachment.

Interview with the natives.

Frobisher still cherished hopes of discovering his men. A large party appearing on the top of a hill, signs were made of a desire for mutual accommodation. A few of them advanced, and were introduced to the captives. The parties were deeply affected, and spent some time without uttering a word; tears then flowed; and when they at last found speech, it was in tones of tenderness and regret, which prepossessed the English much in their favour. The captain now assured them that, on condition of their restoring his five men, they should receive back their own friends, with the addition of sundry of those little articles on which they set the highest value. This they promised, and also to convey a letter to the prisoners. Doubtless by this time these unfortunate individuals no longer lived, and the natives consequently had no means of redeeming their pledge; but they determined, by force or stratagem, to effect their purpose. Three men appeared holding up flags of bladder, inviting the Europeans to approach; but the latter, who saw the heads of others peeping from behind the rocks, resolved to proceed with the utmost caution. The savages began by placing in view large pieces of excellent meat; and when their enemy could not be caught by that bait, one of them advanced very close, feigning lameness, and seeming to offer himself an easy prey. Frobisher allowed a shot to be fired, by which this person was cured at once, and took to his heels. Seeing all their artifices fail, the barbarians determined upon main force, and pouring down to the number of a hundred, discharged their arrows with the greatest fury. They even followed a considerable way along the coast, regardless of the shot directed against them by the sailors; these last, in the mean time, being too distant from the shore to suffer the slightest annoyance.

Negotiation entered into.

Native attack.

Several of his men, indeed, asked permission from their leader to land and attack the barbarians; but this he refused, as only calculated to defeat their main object, and to cause useless bloodshed.

Formation of ice.

The 21st of August had now arrived, the ice was beginning to form around the ships, and though little progress had been made towards China, the crews had put on board two hundred tons of the precious mineral. They therefore mounted the highest hill, fired a volley in honour of the Countess of Warwick, and made their way home.

Return to England.

Notwithstanding the vicissitudes which had marked this voyage, the arrival of the ships was hailed with the utmost exultation. Enthusiasm and hope, both with the queen and the nation, rose higher than ever. The delusion of the golden ore continued in full force, and caused those desolate shores to be regarded as another Peru. Special commissioners, men of judgment, art, and skill, were named by her majesty to ascertain both the quality of the shining substance and the probability of effecting a voyage to India. After due inquiry, a most favourable report was made on both subjects, recommending not only that a new expedition on a great scale should be fitted out, but a colony established on that remote coast, who might at once be placed in full possession of its treasures, and be on the watch for every opportunity of farther discovery. To brave the winter of the Polar regions was a novel and daring enterprise; yet such was then the national spirit, that the appointed number of a hundred was quickly filled up. There were forty mariners, thirty miners, and thirty soldiers, in which last number were oddly included not only gentlemen, but gold-finers, bakers, and carpenters. Materials were sent on board the vessels fit for being converted into a fort or house. The squadron was the largest that had yet ventured to plough the northern deep. It consisted of fifteen vessels, furnished by various ports, especially by those of the west; and the rendezvous took place at Harwich on the 27th May 1578, whence they sailed

Proposed polar colonies.

CHAP. VI

on the 31st. The captains waited on the queen at Greenwich, and were personally addressed by her in the most gracious manner,—Frobisher receiving a chain of gold, and the honour of kissing her majesty's hand.

New expedition.

It has been already observed, that expeditions got up on the greatest scale, and with the most ample means, have usually proved the most unfortunate. A numerous fleet is ill calculated to steer through the ice-entangled straits, and amid the huge masses which are found floating in all parts of the Arctic ocean. On reaching the Queen's Foreland, at the opening of Frobisher's Strait, the navigators found it frozen over from side to side, and barred as it were with successive walls and bulwarks. A strong easterly wind had driven many icebergs upon the coast, and hence the situation of the mariners soon became very perilous. The Dennis, a large vessel, on board of which was part of the projected house, received such a tremendous blow from a mountain of ice, that it went down almost instantly, the men being with difficulty saved by another ship which hastened to their aid. This spectacle alarmed the other crews, who felt that the same fate might next moment be their own. The danger was much augmented when the gale increased to a tempest, and the icy masses, tossing in every direction, struck furiously against the sides of the vessels. Invention was now variously at work to find means of safety. Some moored themselves to these floating islands, and being carried about along with them, escaped the tremendous concussions which they must otherwise have encountered. Others held, suspended by the sides of the ship, oars, planks, pikes, poles, every thing by which the violence of the shocks might be broken; yet the ice, "aided by the surging of the sea and billow," was seen to break in pieces planks three inches thick. The commander considers it as redounding highly to the glory of his poor miners and landsmen, wholly unused to such a scene, that they faced with heroism the assembled dangers that besieged them round. "At length it pleased God with his eyes

Perilous situation.

Futile attempts to avert danger.

of mercy to look down from heaven,"—a brisk south-west wind dispersed the ice, and gave them an open sea through which to navigate.

Course pursued.

Having spent a few days in repairing his squadron, Frobisher again used all his efforts to penetrate to the spot where he was to found his colony. After considerable exertion he made his way into the strait, when he discovered that he was sailing between two coasts; but owing to the mists and thick snow which darkened this northern midsummer, nothing could be distinctly seen. As, however, clear intervals occasionally occurred, affording partial glimpses of the land, the surmise arose, that this was not the shore along which they had formerly sailed. Being little inclined to listen to a doubt which would have convicted him of having thrown away much of his time and labour, he still pressed onwards. Once the mariners imagined they saw Mount Warwick, but were soon undeceived. At length Christopher Hall, chief pilot, stood up and declared, in the hearing of all the crew, that he never saw this coast before. The commodore still persevered, sailing along a country more populous, more verdant, and better stocked with birds, than the one formerly visited. In fact this was probably the main entrance into Hudson's Bay, by continuing in which he would have made the most important discoveries. But all his ideas of mineral wealth and a successful passage to India were associated with the old channel; and, on being obliged to own that this was a different one, he resolved to turn back. In this retreat the fleet was so involved in fogs and violent currents, and so beset with rocks and islands, that the sailors attributed to a special interposition of Providence the fact of their getting out in safety. When they had reached the open sea, and arrived at the mouth of the desired strait, it was almost as difficult to find an entrance. However, the resolute navigator was constantly on the watch, and wherever there appeared any opening, it is said, "he got in at one gap and out at another," till at length he reached his purposed haven in the

Change of route.

Return to the open sea.

CHAP. VI.

depths of the North. But, before the crews were completely landed, the 9th of August had come, thick snows were falling, and it behoved them to hold a solemn consultation as to the expediency of persevering in the establishment of the projected colony. There remained of the house only the materials of the south and east sides; the rest had either gone down in the Dennis, or been shattered into fragments while suspended from the ships to meet the strokes of the ice. Great part of the bread was spoiled, and the liquors had sustained a woful leakage; in short, there was no longer an adequate provision for a hundred men during a whole year. In these circumstances Captain Fenton of the Judith suggested, that what remained of the house might be formed into a hut for sixty men, with whom he undertook to pass the winter; but the carpenters being consulted, declared that such a structure could not be erected in less than two months, while their stay could not possibly be protracted beyond twenty-six days. Renouncing the idea of settlement, Frobisher still asked his officers whether they might not, during the remaining interval, attempt some discovery to throw a redeeming lustre on their unfortunate enterprise; but in reply, they urged the advanced season, the symptoms of winter already approaching, and the danger of being enclosed in these narrow inlets, where they would be in the most imminent danger of perishing;—in short, that nothing was now to be thought of but a speedy return homewards. This was at length effected, not without the dispersion of the fleet, and considerable damage to some of the vessels.

Tardy arrival at the desired locality

Obstacles to colonization.

Failure of the expedition

Meta Incognita.

The record of these voyages contains notices of the country and people, which strikingly agree with those collected by recent navigators. This Meta Incognita, which includes only the countries near the entrances of Hudson's Bay, is considered as a cluster of large islands, separated by narrow inlets,—an idea perhaps not so unfounded as was for some time supposed,—and consisting of high lands, covered with snow even in the midst of

summer. The navigators were surprised to find in latitude 60° and 61° a cold much more intense than at the North Cape and Wardhuys in latitude 72°. The people are described as of a ripe olive complexion, with long black hair, broad faces, and flat noses, much resembling Tartars, or, more strictly, Samoiedes, to whom, according to the best information Frobisher could obtain, they were also similar in their habits of life. The land could scarcely yield either grain or fruit, and the inhabitants made no attempt to cultivate them, eating merely shrubs and grass, "even as our kine do;" or, as Settle expresses it, "such grass as the country produceth they pluck up and eat, not daintily or saladwise, but like brute beasts devouring the same." In other respects, he observes, they seek "by their hunting, fishing, and fowling, to satisfy their greedy paunches, which is their only glory." They use neither seat, table, nor cloth; but, "when they are imbrued with blood knuckle deep, they use their tongues as apt instruments to lick them clean." From the disgusting manner in which they devoured their meat, very often in a putrid state, without any attempt at cookery, an inference is somewhat rashly drawn, that they would not make the least hesitation to partake of human flesh. Frobisher saw only their summer-houses, which are described as poor caves, like ovens, having for doors holes resembling those of a fox or cony burrow. They are said to be formed of pieces of whalebone meeting at top, and covered with seal-skin, and to have in the inside a layer of moss, which serves for beds to sleep on. At the same time they were found to be sharp-witted, and showed by signs great readiness, both in their understanding and replies. If they could give no information on any subject, they shut their eyes; if they did not comprehend what was said to them, they stopped their ears. They took the greatest delight in music; repeating and keeping time to any tune with voice, head, hand, and foot. Their darts, arrows, and other weapons, were skilfully contrived, and used with a courage amounting even to desperation, of which

Appearance of the natives.

Food.

Summer-houses.

Love of music

Kayak, or Greenlander's Canoe.

Skin boats.

repeated instances have been given. Their little boats of skin (kayak) were moved by one oar, with a swiftness which no English sailor could match. The astonishment of one of them was very great when he saw himself in a mirror. "He was upon the sudden much amazed thereat, and beholding advisedly the same with silence a good while, at length began to question with him as with his companion; and finding him dumb, seemed to suspect him as one disdainful, and would have grown into choler, until at last, by feeling and handling, he found the deceit, and then, with great noise and cries, ceased not wondering, thinking that we could make men live and die at our pleasure." Great signs of mutual attachment appeared between the male and female captives who were brought home on the second voyage. She killed and dressed the dogs for him, and tended him carefully when sick, while he, on the other hand, picked out the sweetest and fattest morsels, and laid them before her; yet they lived entirely as brother and sister, without the slightest impropriety.

Native captives.

Results of failure.

Our naval records do not inform us of the feelings excited in the nation by the return from this perilous and unsuccessful voyage. The failure of repeated attempts, and especially of one got up with so much cost, probably produced the usual effect of indifference and despondency. The glittering stone, which was to have converted this northern Meta into another Peru, was never more heard of; a few careful assays having doubtless established its utter insignificance. Frobisher recommended strongly a trial of the first inlet which he

had entered, as being, in comparison of the other, broader, and every way more promising; but the public could by no means be roused to any farther efforts, and he was obliged to seek in other climates employment for his daring and active spirit. He accompanied Sir Francis Drake to the West Indies; he commanded one of the largest ships in the fleet which opposed the Spanish Armada; and fought with such bravery that he was decorated with the honours of knighthood. Being afterwards sent to assist Henry IV. against the League, he was employed in the attack of a small fort on the coast of France, where he received a wound from a ball, which, through unskilful treatment, proved fatal in November 1594.

Frobisher's plans.

Seven years after Frobisher's last voyage, the spirit of the nation was again roused. Divers opulent merchants of London and of the west determined to "cast in their adventure;" and, leaving wholly out of view the delusive hopes of gold which had misled the captain now named, directed theirs entirely to the discovery of a passage to India. They fitted out two vessels, the Sunshine and Moonshine, of 50 and 35 tons respectively, which were placed under the command of John Davis, a steady and determined seaman. He was endowed also with a large portion of good humour, by which he was likely to render himself acceptable to the rude natives of those inhospitable shores; and to promote still farther this important object, he was provided, not only with an ample supply of the gifts most suited to their taste, but with a band of music to cheer and recreate their spirits. On the 7th June 1585 he set sail from Dartmouth; and on the 19th July, as he approached the Arctic boundary, the seamen heard, amid a calm sea covered with thick mist, a mighty roaring, as of waves dashing on a rocky shore. Though the soundings gave 300 fathoms, the captain and master pushed off in the boat to examine this supposed beach, and were much surprised to find themselves involved amid numerous icebergs, and that all this noise had been caused by the

New expedition.

Captain John Davis.

CHAP. VI.

rolling and beating of these masses against each other. He landed on several of these floating islands, and broke off pieces of ice, which, being carried to the ship, were converted into good water. Next day he came in view of the south-western coast of Greenland, which appeared the most dreary and desolate ever seen; "deformed, rocky, and mountainous, like a sugar-loaf, standing to our sight above the clouds. It towered through the fog like a white list in the sky, the tops altogether covered with snow, the shore beset with ice, making such irksome noise that it was called the *Land of Desolation*." The water on this coast was black and thick, like a standing pool, and though they saw many seals floating, and birds beating upon the surface, none could be caught.

Coast of Greenland.

Land of desolation.

After sailing several days along this dreary shore, without being able to approach on account of the ice, Davis pushed out north-westward into the open sea, hoping in "God's mercy to find our desired passage." On the 29th he came in sight of a land in 64° north latitude, which was still a part of Greenland; but as the wind was unfavourable for proceeding in the proper direction, while the air was temperate, and the coast free from ice, he resolved to go on shore and take a view of the country and people. Accompanied by only two individuals, he landed on an island, leaving directions for the rest to follow as soon as they should hear a signal. The party mounted the top of a rock, whence they were espied by the natives, who raised a lamentable noise, with loud outcries like the howling of wolves. Davis and his comrades hereupon struck up a high note, so modulated, that it might at once amuse the savages and put his own crew on the alert. Burton, the master, and others hastened, well armed, yet with the band playing, and dancing to it with the most inviting signs of friendship. In accordance with this gay summons, ten canoes hastened from the other islands, and the people crowded round the strangers, uttering in a hollow voice unintelligible sounds. The English con-

Discovery of natives.

tinued their friendly salutations, while the Esquimaux still showed signs of jealousy and alarm, when at length one of them began to point towards the sun and beat his breast. These signs being returned by John Ellis, master of the Moonshine, they were induced to approach; when, on being presented with caps, stockings, gloves, and other articles, their fears gave place to the most cordial amity. Next day there appeared thirty-seven canoes, the crews of which kindly invited the strangers on shore, expressing the utmost impatience at their delay. Davis manned his boats and went to them; upon which one of their number, after shaking his hand, kissed it, and all resigned themselves to confidence and affection. The barbarians parted with every thing, the clothes from off their backs, consisting of seal-skins, and birds' skins with the feathers on them, their buskins of well-dressed leather, their darts, oars, and five canoes, accepting cheerfully in return whatever their new visiters chose to give, and kindly aiding each other under the privations thus occasioned. They offered to return next day with an ample store of furs and skins, which they saw the foreigners value so highly; but a favourable breeze springing up, the captain very properly determined to allow nothing to interfere with his schemes of discovery. He steered directly across the strait, or rather sea, which still bears his own name. On the 6th August he discovered high land, which he named Mount Raleigh, being part of Cumberland Island. Here, anchoring in a fine road, the seamen saw three white animals, which seemed to be goats. Desirous of fresh victuals and sport, they pursued them, when they soon perceived that they were in chase of three monstrous bears. The animals rushed on with great fury, till, being received with several balls, they retreated, apparently not much hurt, but were followed and at last killed. There were no symptoms of their having fed on any thing except grass; but it was necessary to clear away a very large quantity of fat before the flesh could be eaten.

Friendly interview.

Liberality of the natives.

Davis' Straits.

CHAP. VI.

Cape of God's Mercy.

Davis, after coasting about for some days, again found himself at the cape which he had at first reached on his crossing from the opposite shore of Greenland. This promontory, which he called God's Mercy, he now turned, when he entered a sound stretching north-westward, twenty or thirty leagues broad, free from ice, and its waters having the colour and quality of the main ocean. After proceeding sixty leagues, he observed an island in the mid-channel, which still, however, afforded an open passage; so that his hopes daily increased, till about the end of August, when being involved in fogs and contrary winds, he determined to suspend operations for the season and return to England.

Native dogs.

On one of the islands in this sound the seamen heard dogs howling, and at length saw twenty of them approach, having the appearance of wolves. Impressed, however, with the idea that only animals of prey could be found on these shores, they fired and killed two, round one of whose necks they found a collar, and soon afterwards discovered the sledge to which he had been yoked. Davis observed abundance of the black and glittering stone of Frobisher, and many of the rocks appeared "orient like gold;" but little attention was now excited by these delusive appearances.

Effects of the expedition.

Although nothing was actually done by this expedition, yet the views which it had opened up inspired sanguine hopes, and facilitated the equipment of a fresh expedition. To the slender armament of the Sunshine and Moonshine was now added the Mermaid of 120 tons, with a boat or pinnace. Davis sailed again from Dartmouth on the 7th May, and on the 15th June came in view of the southern extremity of Greenland; but, owing to severe storms, it was the 29th before he reached the land formerly visited in lat. 64°. As he approached, the natives came out in their canoes at first with shouts and cries; but, recognising their companions of the preceding year, they hastened forward, and hung round the vessel with every expression of joy and welcome. Seeing them in such favourable dispositions, the

captain went ashore and distributed in presents twenty knives, refusing the offer of skins in return. The most intimate acquaintance was now resumed; yet they never met the strangers anew without crying "*Iliaout!*" beating their breasts and lifting their hands to the sun, by which a fresh treaty was ratified. The two parties amused themselves by contests in bodily exercises. The Esquimaux could not match their opponents in leaping; but in wrestling they showed themselves strong and skilful, and threw some of the best among the sailors. By degrees they began to manifest less laudable qualities. They exercised many and solemn incantations, though, Davis thanks God, without any effect. They kindled a fire by rubbing two sticks against each other, and invited him to pass through it; but he, in contempt of their sorcery, caused the fire to be trodden out and the embers thrown into the sea. They also showed the very inconvenient propensity of appropriating every article, especially iron, which came under their notice. Perhaps it was imprudent ever to have made presents, thus suggesting the idea, which does not seem to have before entered their minds, that any thing might be obtained without an equivalent. Be this as it may, they soon reached the highest pitch of audacity; they stole a spear, a gun, a sword, cut the cables, and even the Moonshine's boat from her stern. The principal officers remonstrated with the captain, and reminded him, that for their security he must "dissolve this new friendship, and leave the company of those thievish miscreants." He fired two pieces over their heads, which "did sore amaze them," and they fled precipitately. But in ten hou they again appeared, with many promises and presents of skins; when, on seeimg iron, "they could in nowise forbear stealing." The commander was again besieged with the complaints of his crew; however, "it only ministered to him an occasion of laughter," and he bid his men look vigilantly to the safety of their own goods, and not deal hardly with the natives, who could scarcely be expected in so short a time "to know their evils."

Meeting with the natives.

Thefts.

Alarm of the natives.

CHAP. VI.

Exepdition to the interior.

Davis now undertook an expedition to observe somewhat of the interior. He sailed up what appeared a broad river, but which proved only a strait or creek. A violent gust of wind having obliged him to seek the shelter of land, he attempted to ascend a very lofty peak; but "the mountains were so many and so mighty, that his purpose prevailed not." While the men were gathering muscles for supper, he was amused by viewing, for the first time in his life, a waterspout, which he describes as a powerful whirlwind, taking up the water and whisking it round for three hours without intermission. Next day he re-embarked, and penetrated higher up the channel; but was surprised to find, instead of the huge unbroken continent which he had supposed, only waste and desert isles, with deep sounds and inlets passing between sea and sea.

Moderation in dealing with the natives.

During the captain's absence matters had become worse with the Esquimaux, and on his return the sailors opened a fearful budget; stating that the natives had stolen an anchor, cut the cable, and even thrown stones of half a pound weight against the Moonshine; and he was asked if he would still endure these injuries. Davis, who probably suspected that their own dealings had not been very gentle, bid them have patience, and all should be well. He invited a party of the savages on board, made them various little presents, taught them to run to the topmast, and dismissed them apparently quite pleased. Yet no sooner had the sun set than they began to "practise their devilish nature," and threw stones into the Moonshine, one of which knocked down the boatswain. His meek spirit was at length kindled to wrath, and he issued orders for two boats to chase the culprits; but they rowed so swiftly that the pursuers soon returned with "small content." Two days after, five of them presented themselves with overtures for a fresh truce; upon which the master came to Davis, declaring that one of them was "the chief ringleader, a master of mischief," and urged vehemently not to let him go. He was made captive, and a fair wind suddenly

Capture of a native

springing up, the discoverers set sail, and carried him away, many doleful signs being exchanged between him and one of his countrymen; however, on being well treated, and supplied with a new suit of frieze, his spirits revived, he became a pleasant companion, and used occasionally to assist the sailors.

Cheerfulness of the captive.

Davis, finding the wind favourable, pushed across the bay, in hopes of attaining the object of his voyage. On the 17th July the ship's company descried a land diversified with hills, bays, and capes, and extending farther than the eye could reach; but what was their disappointment on approaching, to find that it was only "a most mighty and strange quantity of ice!" It was, in fact, that immense barrier which often, for a great part of the season, fills the middle of Baffin's Bay. As they coasted along this wide field a fog came on, by which the ropes, shrouds, and sails, were all fast frozen,—a phenomenon which, on the 24th July, appeared more than strange. Dismayed by these appearances, the seamen considered the passage hopeless, and, in a respectful yet firm tone, warned Davis, that by "his over-boldness he might cause their widows and fatherless children to give him bitter curses." He was not unwilling to consider their case; yet, anxious not to abandon so great an enterprise, he determined to leave behind him the Mermaid, as a vessel less convenient and nimble, and to push on in the Moonshine with the boldest part of his crew. Having found a favourable breeze, he at last, on the 1st August, turned the ice, and in lat. 66° 33′ reached land; along which he now coasted southwards for about ten degrees, entangled among a number of islands, and missing in his progress the different inlets which afforded an entrance into Hudson's Bay. The shores were crowded with incredible flocks of gulls and seamews, and the water so abounded in fish that, though their tackle was very indifferent, in the running of an hour-glass the crew caught a hundred cod. On reaching Labrador, the coast was seen covered with ample forests of pine, yew, and birch; but five men who landed were

Voyage pursued.

Perseverance of Davis.

CHAP VI.

Return.

beset by the natives, and all killed or wounded except one. The ship, too, being exposed to a violent tempest, and September now approaching, the captain judged it wisest to return to England.

New expedition.

The public mind was considerably damped by the issue of this expedition; so that Davis found no small difficulty in obtaining the means for equipping another. He was obliged to hold out the inducement that, by proper arrangements, the outlay might be defrayed by fishing, and no additional expense incurred on account of discovery. By these arguments, and by the exertions of his zealous friend, Mr Sanderson, he succeeded in fitting out the Sunshine, the Elizabeth, and a pinnace. This last, to which he mainly trusted for discovery, answered very ill the character which had been given of it, and was found to move through the water like a cart drawn by oxen. On the 16th June 1587 the adventurers arrived at their old coast, and were received by the natives as before with the cry of *iliaout* and the exhibition of skins. These savages, however, lost no time in renewing their former system of thieving; for which great opportunities were afforded during the putting together of a boat consisting of materials brought from England. They carried off the deals, and when fired at placed them before their bodies as shields, thus securing both their planks and persons. It was now arranged that the two large vessels should remain to fish, while Davis in the pinnace stretched out into a higher latitude with a view to discovery. In pursuance of this plan he took his departure; and, continuing to range the coast to the northward, on the 28th he reached a point, which he named Sanderson's Hope, in upwards of 72 degrees, still finding a wide open sea to the west and north. Here, the wind having shifted, he resolved to hold on a western tack across this sea, and proceeded forty leagues without sight of land or any other obstruction, when he was arrested by the usual barrier of ice. He first endeavoured to round it by the north, but, seeing no passage on that side, turned to the south, beating

Plan of discovery.

about several days without success. Tempted by an apparent opening, he involved himself in a bay of ice, from which he was not extricated without much difficulty and some danger; being obliged to wait till the sea beating and the sun shining on this mighty mass should effect its dissolution or removal. At length, on the 19th July, he came in view of Mount Raleigh, and at midnight found himself at the mouth of the inlet discovered in the first voyage, and which has since been called Cumberland Strait. On the morrow he sailed across its entrance, and in the two following days ascended its northern shore, till he was again involved among numerous islands. He seems now to have concluded that this strait must be an enclosed gulf, and shaped his course to reach the sea; but, being becalmed in the bottom of the bay, he could not till the 29th, by coasting along the southern shore, effect his retreat. Frobisher's Strait was now passed, seemingly without being recognised as such, but was called Lumley's Inlet. He next crossed the mouth of an extensive gulf, in one part of which his vessel was carried along by a violent current, while in another the water was whirling and roaring as is usual at the meeting of tides. This recess, being terminated by Cape Chidley, was evidently the grand entrance afterwards penetrated by Hudson. Having now, however, only half a hogshead of water left, he hastened to the point of rendezvous fixed with the two other vessels; when, to his deep disappointment and just indignation, he found that they had departed. It was not without hesitation that, with the slender store remaining in his little bark, he ventured to sail for England; but having scarcely any alternative, he undertook the voyage, and happily accomplished it.

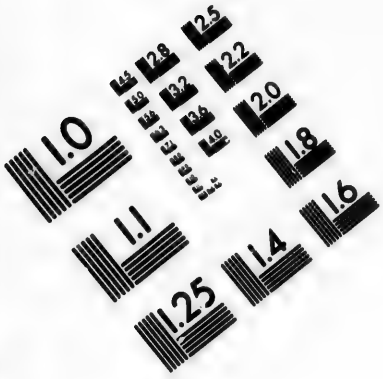
Dangers from ice.

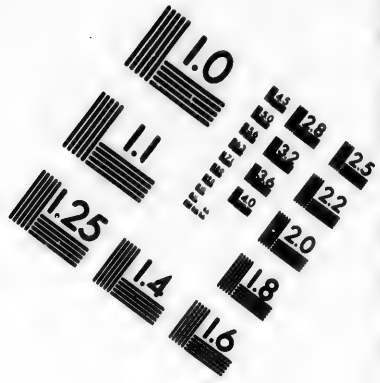
Cumberland Strait.

Cape Chidley.

Davis wrote once more to Mr Sanderson in sanguine and almost exulting terms. He had reached a much higher latitude than any former navigator, and with the exception of the barrier of ice on one side, had found the sea open, blue, of vast extent and unfathomable depth. He considered, therefore, that the success

High expectations.





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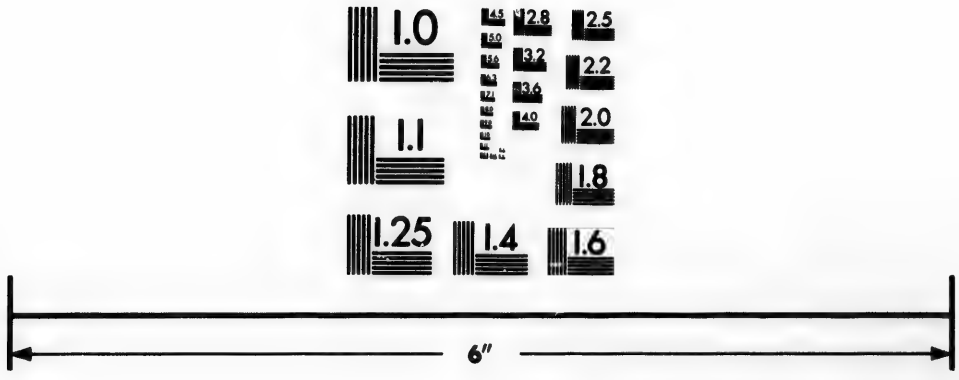

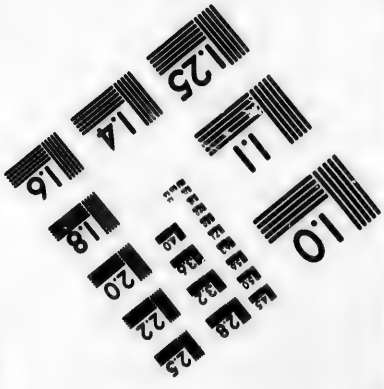

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CHAP. VI.

Public interest exhausted.

of a spirited attempt was almost infallible. But the interest taken by the public in such enterprises seems only capable of being sustained for a certain period. Three failures had exhausted that interest, and made men indisposed to listen or inquire further into the subject. It became the cry, as he informs us,—"This Davis hath been three times employed; why hath he not found the passage?" The death of Secretary Walsingham, occurring at this period, was a severe blow to the cause; while the invasion by the Spanish Armada soon followed, and engrossed for a space all the thoughts and energies of the nation. Mr Sanderson still continued the steady friend of the navigator; but, unable to obtain resources for a new attempt, he could only employ Molyneux, the best artist of his time, to construct a globe which comprised all his friend's discoveries, and is still preserved in the library of the Middle Temple.

Death of Walsingham.

The Levant Company.

In 1602 the spirit of enterprise revived. To the Muscovy Company, who had taken the lead in all the early schemes of discovery, was now added the Levant Company; and these two great bodies, finding the course to India by the Cape still beset with many dangers, determined upon a joint effort to penetrate thither by the north-west. They sent out Captain George Weymouth with two vessels, the Discovery and God-speed, which they called fly-boats, though they were respectively of 70 and 60 tons. He left London on the 2d May, and on the 18th June came in view of the coast of Greenland, which appeared to him "a main bank of ice." The water was in many places as thick as puddle, making him imagine himself among shallows, till the sounding-line gave 120 fathoms without any ground. This, which was formerly observed by Davis, is probably the green cloudy sea of Scoresby, thickened by the infusion of numberless animalcules.

New expedition.

Weymouth having made sail westward with a favourable breeze, came on the 28th in sight of the

coast of America. There appeared a promontory covered with snow, which he concluded to be Warwick's Foreland; but the vessels were tossed to and fro by violent currents, or overfalls, as he calls them, and involved in fogs so thick, that they were once quite close to a bank of ice before it was perceived. However being in want of water, the party landed, loaded their boat with ice, and found it to make very palatable drink. The attention of the crews was arrested by a loud sound like the dashing of waves on the shore; and on approaching the place they were dismayed to find it "the noise of a great quantity of ice, which was very loathsome to be heard." The mist became so thick that they could not see two ships' length, and determined to take down the sails; but were petrified to find them so fast frozen to the rigging, that, in "this chiefest time of summer, they could not be moved." Next morning they renewed the attempt; but it was only by cutting away the ice from the ropes that they could be made to pass through the blocks. The following day the fog lay so thick, and froze so fast, that ropes, sails, and rigging, remained immovable.

Captain Weymouth.

Thick fogs.

These phenomena produced an unfavourable effect on the minds of the sailors, who began to hold secret conferences, ending in a conspiracy "to bear up the helm for England." It was proposed to seize Weymouth, and confine him in his cabin till he gave his consent; but he, receiving notice of this nefarious design, summoned the seamen before him, and, in presence of Mr Cartwright the preacher and Mr Cobreth the master, called upon them to answer for thus attempting to defeat a voyage fitted out at such ample cost by the honourable merchants. The men stood firm, producing a paper signed by their own hands, in which they justified the proposed step as founded on solid reason, without any tincture of fear or cowardice. They represented that if they should suffer themselves to be enclosed in an unknown sea, by this dreadful and premature winter, they would not only be in

Mutiny.

Defence of the conspirators.

CHAP. VI.

Apprehended dangers.

imminent danger of perishing, but could not hope to commence their career of discovery next year sooner than May; while by setting sail in due time from England they might easily reach this coast in that month. He retired to his cabin to deliberate, when he was soon informed that the helm was actually borne up. Hastening on deck, and asking who had done this, he was answered, "One and all!" and he found the combination such as it was impossible to resist, though he took occasion afterwards to chastise the ringleaders. The men, however, declared themselves ready to hazard their lives in any discovery which might be attempted to the southward.

Course changed.

New land.

Accordingly, on descending to lat. 61° N., the captain perceived the entrance of an inlet, into which he sailed, in a south-west direction, a hundred leagues by reckoning; but, encountering fogs and heavy gales, and finding the season far spent, he deemed it necessary to regain the open sea. This inlet, however, was thought to present more favourable hopes of a passage than any other that had yet been discovered. It appears in fact to have been the grand approach to Hudson's Bay; so that Fox justly ascribes some merit to Weymouth for directing his distinguished successor into this spacious expanse. Still, as his course of west by south must have led him from the main channel of this large strait, and thrown him on the western shore of what is now called Ungava Bay, his estimated reckoning of a hundred leagues is evidently overrated. In 55° he found a fair land, consisting of islands and "goodly sounds," apparently the place where the Moravian settlement of Nain was subsequently formed. Soon afterwards a dreadful hurricane from the west seemed to take up the sea into the air, and drove the ships before it with the utmost impetuosity. Had it been from any other quarter they must have been dashed to pieces on rocks; however, they ranged through the open waters, and in the greatest extremity "the Lord delivered us his

Ungava Bay.

unworthy servants." They had now an easy navigation to England.

Captain John Knight.

No farther proceedings occurred till 1606, when the Muscovy and East India merchants fitted out a vessel of 40 tons under John Knight, who, having been employed in the Danish voyages to Greenland, was considered a stout and enterprising sailor. He sailed from Gravesend on the 18th April, but was detained a fortnight in the Pentland Frith; however, "two lustie fellows, well acquainted with these north parts of Scotland," took him into a good harbour called St Margaret's Hope, where he remained till the 12th May. He directed his course almost due west, towards America, and had reached the latitude of 58°, when winds and currents bore him to the southward. On the 19th June he was in 56° 48′, when he saw the continent rising like eight islands. The vessel, meantime, had been so distressed with tempests and heavy fogs, and so bruised between floating icebergs, that it was necessary to put her into a little cove to refit. Here the wind blew with such violence, bringing great masses of ice against the bark, that the rudder was torn from the stern; and hence it became necessary to hale it on shore at the bottom of the bay, that it might undergo a thorough repair.

Departure of an exploring party.

On the 26th, Knight, with some of his men well armed, went across to the opposite coast, in search of a better harbour, and to take a survey of the adjacent country. With this view, accompanied by his mate and another, he went over a hill, leaving three persons in charge of the boat. These last waited the whole day in anxious expectation of the return of the party; they then sounded trumpets, fired muskets, and made every imaginable signal, but without effect. After remaining till eleven at night, they gave up hopes, and returned to the ship with these doleful tidings. The crew were struck with the deepest dismay, at having thus lost their captain and best officers, and being themselves left in such deplorable circumstances. The

CHAP. VI.

boat was fitted out next morning for search, but could not cross the channel on account of the ice. After two distressful days, on the night of Saturday the 28th June, as the boatswain was keeping watch in advance of the tents, he suddenly saw, rushing through the darkness, a great body of men, who, on descrying him, let fly their arrows. He instantly fired and gave the alarm; but before his comrades could start from bed and be mustered, the sloop was filled with savages, who, to the number of fifty, with loud cries and menacing gestures, showed themselves prepared for immediate attack. The English mustered only eight men and a large dog, and though the rain fell in torrents, they determined rather to perish bravely in assailing the enemy, than to await their onset. They advanced, therefore, placing the dog in front. This bold measure appalled the barbarians, who leaped into their skiffs, and made off with all speed; but being entangled in the ice, they were detained a considerable time, during which the pursuers continued firing, and the savages were heard "crying to each other very sore." They are represented, so far as could be judged, as a people of very small stature, tawny-coloured, with thin beards, flat-nosed, and man-eaters; but this last particular was doubtless a matter of mere inference.

Attack of the natives.

Courage of the crew.

The mariners, placed in this alarming situation, made all the haste they could to fit their shattered bark for again taking the sea. They had first to cut a way for her through the ice; but they had nothing which could be called a rudder, and the leaks were so large that they could scarcely enjoy half an hour's relief from the pump. At length they found means to stop up in some degree the principal fissure, and, after hard rowing for three weeks, succeeded in reaching the coast of Newfoundland. Among the fishing-vessels on that station they met most kind and loving friends, who supplied all their wants; and, after twenty days spent in repairing their ship and refreshing their bodies, they enjoyed a good passage to Dartmouth, whence

Disastrous close of the expedition.

they transmitted to London an account of the unfortunate issue of their voyage.

Hudson.

Hudson again assumed the most prominent place in the career of northern discovery, and earned a fame which has ranked him among the greatest of British navigators. We have traced his progress in former chapters,—first in the daring attempt to cross the Pole itself; then in his second voyage towards the north-east; and also in his third excursion, which ended in the discovery of the river now associated with his name. But the most eventful of his enterprises was the one which closed his labours, undertaken with the view to a western passage. The narrative of the commander himself is only a meagre journal, brought down to a particular date; but a full relation is given by a certain personage, naming himself Abacuk Pricket, against whose testimony, however, for reasons that will appear in due time, there rest some heavy objections.

New expedition.

This expedition was fitted out by Sir John Wolstenholme, Sir Dudley Digges, and other persons of distinction, who did not, however, project it on a very magnificent scale. It consisted only of one vessel of 55 tons, provisioned for six months, which left the Thames on the 17th April 1610. Hudson touched at the north of Scotland, the Orkney and Faroe Islands, all which he considered as lying in a lower latitude than the maps represented. On the 11th May he descried the eastern part of Iceland, and was enveloped in a thick fog,—hearing the sea dashing against the coast without seeing it. He was thus obliged to come to anchor; but, as soon as the weather cleared, he proceeded westward along the coast till he reached Snow Hill (Snaefell), which rears its awful head into the inclement sky. On their way the navigators saw Hecla, the volcano of which was then in activity, vomiting torrents of fire down its snowy sides, with smoke ascending to the clouds,—an object not only fearful in itself, but which struck them with alarm, as an indication of unfavourable weather.

Hecla discovered.

Mount Hecla.

Coast of Greenland.

Leaving this coast they now sailed westward, and, after being deceived by several illusory appearances, at length saw the white cliffs of Greenland towering behind a mighty wall of ice. Without attempting to approach the beach, the captain steered towards the south-west, and passed what he imagined to be Frobisher's Straits, which in fact long continued to be erroneously laid down on this shore, though they belong to that of America. He now turned Cape Farewell, and "raised the Desolations," making careful observation of those points of land which he found not well delineated in the charts. The mariners soon began to

Icebergs

descry, floating along, the mighty islands of ice,—a sight which appalled all but the stoutest hearts. Onward they advanced, however, sometimes enjoying a clear and open sea, but often encompassed by icebergs or by small and drifting heaps; and at length they had to steer as it were between two lands of ice. On occasions of peril, they not unfrequently moored themselves to the larger masses; but seeing one of them split, and fall with a tremendous crash into the waves, they no longer trusted

Land discovered.

to such a protection. On the 25th June land appeared to the north, was again lost sight of, and afterwards discovered to the south; so that they found themselves

at the broad entrance of the channel which has since obtained the name of Hudson's Strait. They were now still more annoyed with ice in various forms, particularly that of large islands standing deep in the water, which were very difficult to avoid from the violent ripples and currents. Thus they were often obliged, especially amid thick fogs, to fasten their vessel to the firmest of these masses; and they even used to land upon them from time to time, collecting the water melted in the hollows, which proved to be sweet and good. Amid these vicissitudes many of the sailors fell sick; and though Pricket does not choose to assert that their sole malady was fear, yet in several he saw no signs of any other. The crews of this period, indeed, display few tokens of that hardihood with which the followers of Willoughby and Frobisher were wont to brave the northern tempests. Hudson seeing his men in this depressed state of mind, bethought himself of an expedient by which he hoped to animate them. He called them together, showed them his chart, from which it appeared that they had penetrated farther into the Straits by a hundred leagues than any former expedition, and put it to themselves whether they would advance,—yea or nay! This was a bold experiment, but did not succeed. Some, it is true, expressed themselves "honestly respecting the good of the action;" but others declared they would give nine-tenths of all they were worth, so that they were safe at home; while a third party said they did not care where they went, so they were out of the ice. Vexed and disappointed, he broke up the conference, and followed his own determination. This, we think, is evidently the real state of the case, though Pricket represents that the captain himself was in a state of alarm and doubt. He accuses him also of having remembered too long some of the speeches made on this occasion, to the disadvantage of those by whom they had been uttered.

Hudson's Strait.

Apprehensions of the seamen.

Unavailing appeal to their pride.

Notwithstanding this failure, Hudson, buoyed up by his own courage and resolution, seeing land alternately

CHAP. VI.

Perseverance of Hudson.

on one side and the other, having sometimes a wide and clear sea, and being occasionally involved amid mountains of ice, made his way onward. Certain savage islands in which, when severely pressed by the wind and floe, he found a tolerable retreat, were called "Isles of God's Mercy;" but even this harbour was rendered dangerous by hidden reefs; and the land adjoining to it contained, according to Pricket, only "plashes of water and riven rocks," and had the appearance of being subject to earthquakes. At length they arrived at a broad opening, having a cape on each side, to which the commander gave the names of the two chief patrons of the voyage; to the one on the continent, that of Wolstenholme; to the other on the large island of Mansfield, that of Sir Dudley Digges. Landing at the latter, and mounting a hill, the men descried some level spots abounding in sorrel and scurvy-grass, plants most salutary in this desert region; while herds of deer were feeding, and the rocks were covered with an unexampled profusion of fowls. Seeing such abundant materials, both for sport and food, the crew, who had ever shown the most anxious concern for their own comfort, earnestly besought their captain to allow them to remain and enjoy themselves for a few days on this agreeable spot; but he, perceiving that the season for his chief enterprise was rapidly passing away, refused to comply. He had not proceeded long in this channel when the coast on each side was observed to separate, and he beheld before him a wide ocean, to which the eye could discover no termination. It seemed to him, doubtless, a portion of the mighty Pacific. Here, however, his narrative closes, without expressing those feelings of pride and exultation which must have filled his mind at this promised fulfilment of his highest hopes. The relation of Pricket, on which we must now depend, shows too clearly that many of his followers would have had no sympathy with such elevated feelings.

Mansfield Island.

Expanse of Hudson's Bay

The expanse thus discovered by the navigator was the great inland sea, called from him Hudson's Bay;

and it was a grand discovery, though not exactly what he imagined. The 3d of August was now arrived, a season at which the boldest of northern adventurers had been accustomed to think of returning. But, little inclined to such a resolution, he continued to sail along the coast on the left, which must have appeared to him the western boundary of America,—hoping probably before the close of autumn to reach some cultivated land, in a temperate climate, where he might take up his winter quarters. The shores along this bay, however, though not in a very high latitude, are subject to the rigours of a most inclement sky. Entangled amid the gulfs and capes of an unknown coast, struggling with mist and storm, and ill seconded by a discontented crew, he spent three months without reaching any comfortable haven. It was now the first of November: the ice was closing in on all sides; and nothing remained but to meet the cheerless winter which had actually begun. The sailors were too late of attempting to erect a wooden house; yet the cold, though severe, does not seem to have reached any perilous height. Their chief alarm respected provisions, of which they had brought only a six months' supply, and consequently had now but a small remnant left. Hudson took active measures to relieve this want. He carefully husbanded the original stock, and promised a reward to every one who should kill beast, fish, or bird; and "Providence dealt mercifully," in sending such a number of white partridges, that in three months they secured a hundred dozen. In spring these visiters disappeared, but were succeeded by flocks of geese, swans, ducks, and teal, not natives of that region, but on their flight from south to north. When these were passed, the air no longer yielded food, but the sea began to open, and having on the first day taken five hundred fishes of tolerable size, they conceived good hopes. This success did not continue; and being reduced to great extremity, they searched the woods for moss, which they compare, however, to pounded timber: they ate even frogs. The commander under-

Commencement of winter

Encompassing difficulties.

Failing provisions

CHAP. VI.

took an excursion with a view to establish an intercourse with the inhabitants; but they fled, setting fire to the woods behind them. An interview was obtained with one, whom they loaded with gifts; yet he never returned. Discontents arose as to the distribution of the small remaining portion of bread and cheese; to allay which the captain made a general and equal partition of the whole. This was a bad measure as applied to such a description of persons, many of whom knew not how "to govern their share," but greedily devoured it as long as it lasted. One man even ate the whole in a day, and brought on a dangerous surfeit; and their distress, now greater than ever, soon arrived at a most fatal crisis.

Terror of the natives.

Hudson, as may be observed, had from the first to struggle with an unprincipled, ill-tempered crew, void of all concern for the ultimate success of the voyage. He had probably hoped, as the season should advance, to push on southwards, and reach next summer the wealthy regions for which he was commissioned to search. The sailors, on the contrary, had fixed their desires on "the cape where fowls do breed," the only place where they expected to obtain both present supply and the means of returning to England. Ringleaders were not wanting to head this growing party of malecontents. At the entrance of the bay the captain had displaced Ivet the mate for insubordination, and appointed in his room Bylot, a man of merit, who had always shown zeal in the general cause. He had also changed the boatswain. But the most deadly blow was struck by Green, a wretch whom, after being cast off by all his friends, the captain from humanity had taken on board, and endeavoured to reclaim and restore to society. He was possessed of talents which made him useful, and had even rendered him a favourite with his superior; and among other discontents it was reckoned one, that a veil was thrown over several flagrant disorders of which he was accounted guilty. Yet some hot expressions of Hudson, caused, it is said, by a

Unprincipled crew.

Insubordination.

Baseness of Green.

misunderstanding about the purchase of a gray coat, so acted on the fierce spirit of this ruffian, that, renouncing every tie of gratitude, and all that is sacred among mankind, he became the chief in a conspiracy to seize the vessel and expose the commander to perish. CHAP. VI. Conspiracy.

After some days' consultation, the time was fixed for the perpetration of this horrible atrocity. On the 21st June, 1611, Green, and Wilson the boatswain, came into Pricket's cabin, and announced their cruel resolution,—adding, that they bore him so much good-will as to wish that he should remain on board. The narrator avers most solemnly, that he exhausted every argument to induce them to desist from their horrid purpose, beseeching them not to do a thing so foul in the sight of God and man, and which would for ever banish them from their native country, their wives, and their children. Green wildly answered, that they had made up their minds to go through with it or die, and that they would rather be hanged at home than starve here. An attempt was then made by him to negotiate a delay of three, two, or even one day, but all without effect. Ivet came next, of whom, as being a person of mature age, there seemed more hope; but he was worse than Green, declaring that he would justify in England the deed on which they had resolved. John Thomas and Michael Perse now came in, proving themselves "birds of a feather," and Moter and Bennet having followed, an oath was administered to the following tenor:—"You shall swear truth to God, your prince, and country; you shall do nothing but to the glory of God and the good of the action in hand, and harm to no man." Pricket complains of the reproach thrown upon him for having taken this oath, the bare terms of which are certainly unexceptionable; but the dark proceedings by which they were illustrated marks them as containing an implied obligation to remain at least passive on this dreadful occasion. All was now ready, but the conscientious historian of the voyage succeeded in persuading them to postpone till

Pricket.

Resolution of the mutineers.

Oath administered.

CHAP. VI.

daylight the accomplishment of their crime. They, however, kept strict watch through the night, and held themselves ready to act at the first appearance of dawn.

Seizure of Hudson.

Daybreak approaching, the captain came out of his cabin, when he was instantly assaulted by Thomas, Bennet, and Wilson, who seized him and bound his hands behind his back; and on his eagerly asking what they meant, told him he should know when he was in the boat. Ivet then attacked King the carpenter, known as the commander's most devoted adherent. That brave fellow, having a sword, made a formidable resistance, and would have killed his assailant, had not the latter been speedily reinforced. The mutineers then offered to him the choice of continuing in the ship; but he absolutely refused to be detained otherwise than by force, and immediately followed his master, whom the conspirators were already letting down the sides of the vessel into the shallop. Then, with a barbarity beyond all example, they called from their beds and drove into it, not simply the friends of Hudson, but the sick and infirm sailors who could afford no aid, and whose maintenance would have been burdensome. They threw after them the carpenter's box, with some powder and shot; and scarcely was this transaction completed, when they cut the boat from the stern, "out with their topsail," and set off, flying as from an enemy. The great navigator, thus abandoned, was never heard of more; and he undoubtedly perished on those desolate shores, though the form or duration of the distress to which he fell a victim must be for ever unknown.

Barbarity of the mutineers.

Insubordination in the ship.

The sailors, as soon as the guilty deed was accomplished, regarding the ship as a captured vessel, broke open every chest, and seized on every remnant of food which could be discovered. Green, however, who now assumed the command, used some vigour in restoring order. He placed the cabin and provisions under the charge of Pricket, who was afterwards accused of a matter no less than treason, that of secreting some cakes of bread. As soon as the mutineers had time to think,

painful reflections began to arise. Even Green admitted that England at this time was no place for them, nor could he contrive any better scheme than to keep the high sea till, by some means or other, they might procure a pardon under his majesty's hand and seal. The vessel was now embayed, and detained for a fortnight amid fields of ice, which extended for miles around it and, but for some cockle-grass found on an island, they must have perished by famine. Considerable disputes with respect to the steerage arose between Ivet and Bylot, who alone had any pretensions to skill; but the latter, being justly regarded with the greatest confidence, at length guided them to Cape Digges, the longed-for spot, the breeding-place of fowls, clouds of which accordingly continued still to darken the air. The party immediately landed, spread themselves among the rocks, and began to shoot. While the boat was on shore, they saw seven canoes rowing towards them, whereupon "they prepared themselves for all assayes." However, the savages came forward, beating their breasts, dancing, leaping, and displaying every token of friendship. The utmost intimacy commenced, the parties went back and forward, showed each other their mode of catching fowls, and made mutual presents. In short, the natives appeared the most kind and simple people in the world, and "God so blinded Henry Green" that he trusted them with implicit confidence. One day, when at the height of this affectionate harmony, Pricket, sitting in the boat, suddenly saw a man's leg close to him. Raising up his head, he perceived a savage with a knife uplifted and ready to strike. In attempting to arrest the blow, his hand was cut, and he could not escape two wounds, one in the breast, and one in the right thigh; by which time he got hold of the knife and wrenched it from the assassin, whom he then pierced with his dagger in the left side. At the same time a general attack was made on the crew, dispersed in different quarters. Green and Perse came tumbling down wounded into the boat, which pushed off; while Moter,

Fears of the mutineers.

Disputes as to the pilotage.

Friendly advances of the natives.

Assault.

CHAP. VI.

Death of Green.

"seeing this medley," leaped into the sea, swam out, and, getting hold of the stern, was pulled in by Perse. Green now cried *coragio*, and he and Perse brandished their weapons with such vigour that the savages ceased attempting to enter the boat; but they poured in clouds of arrows, one of which struck the former with so sure an aim that he died on the spot, and his body was thrown into the sea. At length the party reached the vessel; but Moter and Wilson died that day, and Perse two days after. Thus perished the chief perpetrators of the late dreadful tragedy, visited by Providence with a fate not less terrible than that which they had inflicted on their illustrious and unfortunate leader.

Perplexity the crew

The crew, thus deprived of their best hands, were in extreme perplexity, obliged to ply to and fro across the straits, and unable, without the utmost fear and peril, to venture on shore; which yet was absolutely necessary for obtaining provisions to carry them to England. They contrived, at the expense of much toil and hazard, to collect three hundred birds, which they salted and preserved as the only stock whereupon to attempt the voyage. They suffered, during the passage, the most dreadful extremities of famine, allowing only half a fowl a-day to each man, and considering it a luxury to have them fried with candles, of which a weekly distribution was made for that purpose. Ivet, now the sole survivor of the ringleaders in the atrocious conspiracy, sunk under these privations. The last fowl was in the steep-tub, and the men were become nearly desperate, when suddenly it pleased God to give them sight of land, which proved to be the north of Ireland. They complain that, on going ashore at Berehaven, they did not receive the sympathy and kindness which they so much needed; nor was it until they had mortgaged their vessel that they obtained the means of proceeding to Plymouth.

Sufferings during the voyage.

Failure of provisions.

Purchas closes the narrative by saying,—"Well, Mr Pricket, I am in much doubt of thy fidelity;" and he is not singular in this suspicion. It seems clear, at all

events, that he did not avail himself of the means by which he might have attempted to check the horrible mutiny. But, on the other hand, it is probable that, had he been an active agent in the crime, some of his accomplices would have betrayed him, or, had their mutual guilt bound them to each other, some story would have been invented to palliate or conceal the offence; whereas it is set forth by his narrative in all its atrocity.

Suspicions of Pricket.

Notwithstanding the calamitous issue of this voyage, the discovery thereby made of a great sea in the west seemed to justify the most flattering hopes of accomplishing a passage. To follow out this object, Captain, afterwards Sir Thomas Button, was despatched next year (1612), having Bylot and Pricket as guides. This officer, who seems to have been active as well as resolute, soon made his way through the Straits, and pushing directly across the sea that opened to the westward, came in view of an insular cape, called by him Carey's Swan's Nest, and which afterwards proved to be the most southern point of Southampton Island. Nothing else broke the apparent continuity of the ocean, and therefore he cherished sanguine hopes that the first shore he should see would be that of Japan. Suddenly an announcement was made that land was in sight, when there appeared before him an immense range of coast, stretching north and south, and barring all farther progress. Button, deeply disappointed, gave to it the name of Hope Checked. Before he had time to look for an opening, the gloom of the northern winter began to gather, when it behoved him to seek quarters for the season; and these he found in the same creek, which afterwards became the principal settlement of the Hudson's Bay Company. In spite of his best precautions, he lost several men through the severity of the cold, and was unable to extricate himself from the ice till the middle of June. He then steered northward, seeking an outlet through the broad bay between the continent and Southampton Island, since called Roe's Welcome.

Hopes excited.

Captain Button.

Return of winter.

CHAP. VI.

Disappointment.

Observing, however, that the channel became narrower and narrower, till it apparently closed, he gave up the attempt, and, after touching at several points of the island just named, returned to England.

Hopes still entertained.

Although Sir Thomas had been thus baffled by the unwelcome encounter of the western shore of Hudson's Bay, the merchants justly considered it by no means ascertained that the land was so continuous as to preclude all passage into the ocean beyond America; for which reason they resolved to make another attempt, and accordingly, in 1614, they fitted out two vessels under Captain Gibbons, an officer of reputation, pronounced by Button "not short of any man that ever yet he carried to sea." But either his character went beyond his merits, or fortune was singularly adverse, for never was there a more abortive voyage. He was early entangled in a bay on the coast of Labrador, where he was detained the whole summer, and which was afterwards dignified with the appellation of "Gibbons his Hole." Having here sustained some damage from the ice, he no sooner extricated himself than he returned home.

New expedition.

Bylot and Baffin.

The merchant-adventurers, still undismayed, sent out next summer the Discovery under Bylot, who in all the late voyages had approved himself an able navigator, and was accompanied by Baffin, whose name was now established as the most skilful steersman and best nautical observer of the age. After passing Cape Farewell, they saw some most tremendous islands of ice, one of which rose 240 feet above water, and, according to the usual estimate, which makes this visible part only a seventh of the whole, had probably an entire height of 1680 feet. Having entered the Straits, and, on the 2d June, hearing from the northern shore a furious barking of dogs, they landed and found five tents covered with seal-skin, amongst which were running about thirty or forty of those animals, of a brindled black colour, resembling wolves. They had collars and harness suitable for certain sledges, lined with fish-bone, which were

Immense iceberg.

standing by. In one of the houses was a bag containing little images of men, the only specimen observed of such fabrication upon this coast. The navigators soon descried a canoe with twenty individuals, whom they hailed in their native language, holding up knives and other toys. Friendly salutations were given in return; but neither party chose to trust themselves within reach of the other. At a little distance, the conflict of opposite currents amid large icebergs caused so fearful a grinding that they gave to the adjoining land the name of Mill Island. There they would have been in extreme danger, "had not God, who is stronger than ice or stream," delivered them.

Native encampment.

The policy of Bylot in this voyage seems to have been to keep close to the northern shore of the strait; and thus, entering Hudson's Bay at a higher latitude, he hoped to steer clear of those lands which had barred the westerly progress of his predecessors. Therefore, on reaching the Isles of God's Mercy, instead of holding southward to Cape Dudley Digges, he proceeded directly west, and arrived in the broad expanse afterwards called the Fox Channel. At length, indeed, he saw land, but it was bounded by a cape which had every appearance of being the most northerly point of America. He called it Cape Comfort; though this name, it soon appeared, was prematurely given, for a single day had not elapsed when "his sudden comfort was as soon quailed." They were now on the eastern coast of Southampton Island, which spread on all sides to a very great extent, seeming to preclude every prospect of an opening on either hand. Disappointment, the lateness of the season, and the pressure of the ice, concurred in persuading Bylot that there was nothing to be hoped for here, and determined him to set sail immediately for England; whither he carried a most unfavourable report as to any prospect of penetrating westward in that direction.

Course of Bylot.

Fox Channel.

Disappointment.

But the adventurers were not yet discouraged. Turning their hopes to a different quarter, they next year again fitted out Bylot and Baffin, with instructions no

CHAP. VI.

New course proposed.

longer to attempt the passage by Hudson's Bay, but to enter Davis' Strait, and push due north till they reached lat. 80°, if an open sea should allow them to proceed so far; then, turning to the westward, to round, if practicable, the extreme point of America, and to bear down upon Japan. Respecting this voyage, which, perhaps, of all those to the North, produced the most memorable discoveries, Baffin has favoured us with only a very meagre narrative. Following the course pointed out, he reached, on the 30th May, Hope Sanderson, the farthest point attained by Davis. Soon afterwards the

Native females.

expedition came to a number of small islands, on which they found only females, some of very great age. These at first ran and hid themselves among the rocks; but the sailors having reached two dames, one of whom was estimated at fourscore, and having presented bits of iron and the usual toys, induced them to carry a favourable report to their youthful countrywomen. The whole party soon came down to the shore, and four even went on board the boat. The charms of these ladies were heightened or disfigured by long black streaks made on their faces in early life with a sharp instrument, and so

Mode of sepulture.

deep that they could not now be effaced. It was observed, too, that the dead were buried merely by piling stones over them, through which the body appeared, secured, however, from putrefaction by the extreme cold of the climate. The navigators sailed onwards in lat. 74°, when they were arrested by a large body of ice, and obliged to turn into a neighbouring inlet to await its melting. Here they received repeated visits from

Native traffic.

about forty of the natives, the only account of whom is, that they brought an extraordinary quantity of the bones of sea-unicorns, or narwals, great numbers of which animals were seen in the water. Hence this was called Horn Sound. The mass of ice now dissolved before the powerful influence of the sun, and the discoverers sailed northwards among its fragments; but still snow fell every day, and the shrouds and sails were often so hard frozen as to make it impossible to handle them. In 76°

they came to a fair cape, and then to a goodly sound, to which they gave the respective names of Digges and Wolstenholme, the two main promoters of this undertaking, and whose zeal was already associated with localities in the interior of Hudson's Straits. After having sustained a severe storm, they discovered another inlet, which would have supplied them with a multitude of whales, had they been duly provided with the means of capture: this they called Whale Sound. Next, in 78°, appeared a third, the widest and greatest in all this sea, and which was named for Sir Thomas Smith, one of the chief patrons of discovery. This opening, which Baffin seems to have examined very superficially, abounded almost equally in whales, and caused particular astonishment by the extraordinary aberration of the needle, to which nothing similar had been ever witnessed. Between these two sounds was an island which was denominated Hakluyt, after the venerable recorder of early English discoveries. Proceeding now along the south-western boundary of this great sea, the next "fair sound" received the name of Alderman Jones, another encourager of these laudable pursuits. It may be remarked that Baffin notices all these inlets, of which he was the first discoverer, in the most cursory manner, without mention of any attempt to trace, in their interior depths, an opening into any sea beyond. In lat. 74° there appeared another broad opening, which was called Sir James Lancaster's Sound; but while he calls it great, he seems scarcely to have noticed this future entrance into the Polar Sea; on the contrary, he observes, at the very same moment, that the hope of a passage became every day less and less. He sailed on; but a barrier of ice prevented him from approaching the shore till he came within the "indraft" of Cumberland's Isles, "where hope of passage could be none." Finding the health of his crew rather declining, he sailed across to Greenland, where an abundance of scurvy-grass boiled in beer quickly restored them; and "the Lord then sent a speedy and good passage homeward."

Progress of Bylot.

Numerous inlets observed.

Lancaster sound.

CHAP. VI

Baffin's Bay.

On returning, he expressed the most decided conviction that the great sea which he had traversed was enclosed on all sides, and afforded no opening into any ocean to the westward; and his judgment was received by the public, who named it from him Baffin's Bay. He forcibly, however, represented the great encouragement it held out to the whale-fishery, as those huge animals were seen sleeping in vast numbers on the surface of the water, without fear of the ship "or of any thing else." Davis' Strait, accordingly, has ever since been a favourite resort of the fishers, who did not, however, till lately venture into those high latitudes, where whales are described as more peculiarly abundant.

Danish expedition.

There was now a pause in English discovery; every quarter had been tried, and none seemed to afford any farther promise; nor was it till 1619 that Denmark, which has always felt an interest in northern navigation, made an attempt to follow up the success of Hudson and Baffin. At the period just named, Christian IV. sent

Jens Munk.

out two well-appointed vessels under Jens Munk, who had the reputation of a good seaman. He succeeded in penetrating through Hudson's Straits into the bay, whereupon he took upon himself to change the whole nomenclature of that region, imposing the names of Christian's Straits and Christian's Sea, and calling the western coast New Denmark. But this innovation, which was contrary to every principle recognised in such cases, has not been confirmed by posterity. When

Winter quarters

September arrived, and the ice closed in, he thought it prudent to seek winter-quarters, and accordingly established himself in the mouth of an opening which, it is highly probable, was that channel which has since been called Chesterfield Inlet. The season seemed to open with the best promise, commodious huts were constructed, and there were both abundance and variety of game. His people witnessed some of those brilliant phenomena that are peculiar to high latitudes; at one time were two and at another three suns in the sky; and the moon was once environed by a transparent circle, within

which was a cross cutting through its centre. But, instead of amusing their minds and improving science by noting these beautiful appearances, they were depressed by viewing them as a mysterious presage of future evils. Frost now set in with all its intensity; their beer, wine, and other liquors, were converted into ice; the scurvy began its ravages; while they, ignorant of the mode of treating it, employed no remedy except a large quantity of spirits, which has always been found to aggravate that frightful disorder. Unfit for the exertion necessary to secure the game with which the country abounded, they soon had famine added to their other distresses; and their miseries seem to have been almost without a parallel, even in the dark annals of northern navigation. Munk himself was left four days in his hut without food; at length, having crawled out, he found that of the original crew of fifty-two no more than two survived. He and they were overjoyed to meet, and determined to make an effort to preserve life. Gathering strength from despair, they dug into the snow, under which they found herbs and grass, which, being of an antiscorbutic quality, soon produced a degree of amendment. Being then able to fish and shoot, they gradually regained their natural vigour. They equipped anew the smaller of the two vessels, in which they reached home on the 25th September 1620, after a stormy and perilous voyage. The commander declared his readiness to sail again; and there are various reports as to the cause why he did not. Some say, that having in a conference with the king been stung by some expressions which seemed to impute the disasters of the late enterprise to his mismanagement, he died of a broken heart. But Forster relates that, during several successive years, he was employed by his majesty on the North Sea and in the Elbe, and that he died in 1628, when engaged in a naval expedition.

Remarkable phenomena.

Distress of the crew.

Efforts of survivors.

Reception in Denmark.

The English, after Baffin's attempt, appearing to relinquish every prospect of discovery in the more northern seas, confined for a long time all their efforts in the

CHAP. VI.

English expeditions.

direction of Hudson's Bay. But as these did not lead to any important results, and are chiefly connected with the remoter settlements of America, we shall introduce here only a very slight sketch of them.

Captains Fox and James.

Captains Fox and James were fitted out in 1631. The former examined two passages leading to the northward, one on the western side of Southampton Island, called Sir Thomas Roe's Welcome; the other on the eastern side, called from himself Fox's Channel; but he did not trace either to any great height. James, entangled in the southern extremity of Hudson's Bay, spent a winter under the most extreme suffering from cold, and returned next summer to England.

Hudson's Bay settlement.

About 1668 a settlement was formed in the bay just specified, and an extensive company established for the traffic in furs; but this association, though bound by their charter to make the most strenuous exertions for the discovery of a western passage, concerned themselves very little with the subject till 1719, when they were in a manner compelled to fit out an expedition under Knight and Barlow. These officers, however, never returned, and a vessel sent next season under Captain Scroggs could learn no tidings of them; nor was it till nearly fifty years afterwards that the wrecks of their armament were found on Marble Island, where they appear to have been cast ashore and lost.

Middleton's expedition.

In 1741, after a long interval, Captain Middleton, supported by a gentleman of the name of Dobbs, obtained the command of two vessels, with which he sailed up the Welcome. He came to a long inlet called the Wager, but it appeared quite enclosed by a shore, with a river falling into it. Proceeding to its northern extremity, he found a spacious opening, that afforded at first the greatest hopes; but being disappointed by the appearance of land, he named it Repulse Bay. The coast then taking an easterly direction, he followed it till he came to a channel which, from the accumulation of ice at its entrance, he called the Frozen Strait. A current ran through it, which, however, appeared to him to be

merely the one that had entered by Hudson's Strait, and proceeded circuitously round Southampton Island. He returned home, expressing a decided conviction that no practicable passage existed in that direction.

Unsuccessful results.

Mr Dobbs, the mover of the expedition, was deeply disappointed by this result; and from his own reflections, and the statement of several of the inferior officers, became convinced that Middleton had given a very incorrect statement of the facts. Of this he so fully convinced both the Parliament and the nation, that £10,000 was subscribed for a new expedition, and a reward of £20,000 promised to the discoverers of the projected passage. Captains Moor and Smith, in 1746, commanded this armament, which, like most of those equipped with great pomp and circumstance, entirely failed. They merely ascertained, what was pretty well known before, that the Wager afforded no outlet; and, after spending a severe winter there, returned next season to England.

Public zeal in the object.

Complete failure.

It appears, by notices which Mr Barrow has drawn from the Admiralty records, that the armed brig Lion was sent in 1776, under Lieutenant Pickersgill, and in 1777, under Lieutenant Young, with the view of acting in concert with Captain Cook, who in his third voyage might, it was hoped, make his way round from Behring's Strait into the Atlantic. These officers reached respectively the latitudes of 68° and 72°, without effecting or almost attempting any thing farther.

CHAPTER VII.

Voyages by Ross and Parry in Search of a North-west Passage.

Spirited Views of the British Government—Ross's Expedition; He sails round Baffin's Bay; Arctic Highlands; Lancaster Sound; His Return—Parry's First Expedition; Entrance into the Artic Sea; Regent's Inlet; North Georgian Islands; Winters at Melville Island; Mode of spending the Winter; North Georgian Theatre; Gazette; Disappearance of the Animal Tribes; Attempt to proceed Westward during the Summer; His Return to England—Parry's Second Expedition, accompanied by Captain Lyon; He enters Hudson's Strait; Savage Islands; Duke of York's Bay; Frozen Strait; Various Inlets discovered; Ships frozen in for the Winter; Polar Theatre and School; Brilliant Appearances of the Aurora Borealis; Intercourse with a Party of Esquimaux; Land Excursions; Release from the Ice; Voyage Northward; Discovery of a Strait named after the Fury and Hecla; Progress arrested; Second Winter-quarters, at Igloolik; The Esquimaux; Symptoms of Scurvy; Return of the Expedition to England—Parry's Third Expedition; He winters at Port Bowen; Shipwreck of the Fury; Return of the Hecla.

CHAP. VII.

Tardy naval zeal of Britain.

BRITAIN had seen other nations carry off all the great prizes in naval discovery. She had scarcely a vessel on the ocean, when the nations of the Iberian peninsula laid open new worlds, and appropriated the golden treasures of the East and of the West. But her energies being once roused, her efforts were from the beginning bold and adventurous, though sometimes made with inadequate means, on a small scale, and often with a

disastrous issue. Advancing, however, with regular steps, she first rivalled and finally surpassed all other modern states. The reigns of George III. and of his eldest son formed the era which decided both her maritime supremacy and her special eminence in the department of discovery. She achieved almost entirely the exploration of the vast expanse of the South Sea, with its great and numerous islands, leaving to the exertions of France only a scanty gleaning. The revolutionary war, indeed, for some time employed the attention and resources of the nation; but as soon as her signal triumphs had left Britain without an enemy in the seas of Europe, she looked again to this theatre of her former glory. Even amid the din of arms, the African Association pursued their enlightened and philanthropic course; and the important results to which they attained finally induced the government to take an interest in their undertaking, and to aid them with means which no private body could command. Mr Barrow, who by his personal exertions had illustrated some of the most interesting portions of the globe, took the chief direction,—prompting and guiding every step with an energetic perseverance and practical judgment never before extended in an equal degree to similar objects. The measures pursued with respect to Africa do not come within the compass of the present work; but when the spirit was once roused, it did not confine itself to a single point. The northern seas, as a theatre of adventure, had been unoccupied for half a century. There prevailed, indeed, a general impression that so many fruitless expeditions had set the question at rest; but when Mr Barrow applied to it the powers of his vigorous and penetrating judgment, he became sensible that this conclusion was quite groundless. Baffin had once sailed round that great sea, which by him was called a bay, and still bears his name; but his examination had been quite superficial, and insufficient to establish that continuity of land with which the maps had so thoroughly enclosed it. There were even striking facts indicating

Energies roused.

The African association.

Views of Barrow.

CHAP. VII

Supposed communication with the Pacific Ocean.

that there must be a communication with the Greenland Sea on the one side, and the Pacific Ocean on the other. Even in regard to Hudson's Bay, no progress was made since Parliament had offered a reward of £20,000, and sent out the large expedition under Captains Moor and Smith. Thus the grand problem in which the country had long taken so deep an interest was still unsolved; and to decide it nothing more seemed necessary than the application of that skill and undaunted courage, of which British seamen have shown themselves so eminently possessed.

Admiralty expeditions.

In 1818 the Admiralty fitted out two expeditions; one destined for the discovery of the north-west passage, the other to attempt a voyage across the Pole. The first, which is the one we are at present to follow, consisted of the Isabella of 385 tons, commanded by Captain John Ross, an officer of reputation and experience, who had twice wintered in the Baltic, had been employed in surveying the White Sea, and been as far north as Bear or Cherie Island. Another vessel, the Alexander of 252 tons, was intrusted to Lieutenant Parry, a young officer of rising merit, who has since amply justified the choice made by his employers.

Ross and Parry.

Course of the navigators.

On the 18th April the navigators sailed down the Thames, and by the end of the month were off the Shetland Islands. On the 27th May they came in view of Cape Farewell; round which, as usual, were floating numerous and lofty icebergs of the most varied forms and tints. On the 14th June they reached the Whale Islands, where they were informed by the governor of the Danish settlement that the past winter had been uncommonly severe; that the neighbouring bays and straits had been all frozen two months earlier than usual; and that some of the channels northward of his station were still inaccessible, owing to the ice. A curious assertion was here made by the Esquimaux, that they could see across the whole breadth of the bay, though not less than two hundred miles, which, indeed, would be an extraordinary instance of the power of re-

Curious phenomenon.

fraction; but it ought to be observed, that the frozen surface of the sea often presents deceptive appearances of land. On the 17th June, in the neighbourhood of Waygat Island, an impenetrable barrier obliged the discoverers to stop their course, making themselves fast to an iceberg, and having forty-five whale-ships in company. Observations made ashore proved this island to be misplaced on the maps by no less than five degrees of longitude. At length the ice attached to the eastern side of the strait broke up, though still forming a continuous and impenetrable rampart at some distance to the westward, in which direction it had drifted; but in the intermediate space they were enabled to move forward slowly along the coast, labouring through narrow and intricate channels. They steered their course, however, to the higher parts of the bay, and in about lat. 75° came to a coast which had not been visited by former navigators. They were struck, as Baffin had been, by the great number of whales which were slumbering securely in these deep recesses, never having been alarmed by the harpoon. On the 7th August, in the same latitude, a heavy gale sprung up, which, driving the ice against the vessels, made a display of its terrible power. Providentially, when instant destruction was expected, the mass receded, and the ships, owing to the extraordinary strength of their construction, escaped without material injury.

Waygat Island.

Breaking up of the ice.

Gale.

Proceeding along a high mountainous coast, the expedition came to a tribe of Esquimaux, who, of all human beings, seem to exist in a state of the deepest seclusion. They had never before seen men belonging to the civilized world, or to a race different from their own. The first party whom the navigators approached showed every sign of alarm,—dreading, as was afterwards understood, a fatal influence from the mere touch of beings whom they regarded as members of an unknown species. Yet they seem to have felt a secret attraction towards the strangers, and advanced, holding fast the long knives lodged in their boots, and looking

Native settlement.

CHAP. VII.

Interview with the natives.

significantly at each other. Having come to a chasm which separated them from the strangers, they made earnest signs that only Saccheous, the interpreter,* who bore a certain resemblance to themselves, should come across. He went forward and offered his hand; but they shrunk back for some time in alarm. At length the boldest touched it, and finding it flesh and blood, set up a loud shout, in which three others joined. The rest of the party then came up, to the number of eight, with fifty dogs, which joined their masters in raising a tremendous clamour. Ross and Parry now thought it time to advance. This movement excited alarm and a tendency to retreat; but Saccheous having taught these officers to pull their noses, this sign of amity was graciously accepted. A mirror was now held up to them, and on seeing their faces in it they showed the most extreme astonishment, looking round on each other a few moments in silence, then setting up a general shout, succeeded by a loud laugh of delight and surprise. The ship was the next object of their speculation; the nature of which they endeavoured to ascertain by interrogating itself; for they conceived it to be a huge bird spreading its vast wings, and endowed with reason. One of them, pulling his nose with the utmost solemnity, began thus to address it:—"Who are you? Whence come you?

Sign of amity.

Curiosity of the natives.

* This young man was a native of Greenland, who had accompanied the Thomas and Anne, Captain Newton, one of the Leith whalers, on her homeward voyage in 1816; and the following year he went out to the fishery, returning a second time to Europe. During this period, being intelligent and docile, he made considerable proficiency in a course of elementary study, in the prosecution of which he received every assistance from his friends in Leith. On the equipment of the Arctic expedition, his wishes to accompany the discovery-ships having been communicated to government through the medium of Captain Basil Hall, he was immediately engaged as interpreter. His services in that capacity, as the narrative shows, were of eminent utility; and, on his return, the Admiralty, desirous to have him properly instructed, in the event of a future expedition, sent him to Edinburgh for that purpose. Here, however, in the ensuing spring, he was unfortunately attacked with an inflammatory fever, which carried him off in a few days.

ESQUIMAUX SLEDGE

The Esquimaux have [illegible] several [illegible]

CHAP. VII.

Interview with the natives.

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ESQUIMAUX SLEDGE.

The Esquimaux have sledges drawn by large and powerful teams of dogs —Page 218.

Is it from the sun or the moon?" The ship remaining silent, they at length applied to the interpreter, who assured them that it was a frame of timber, the work of human art. To them, however, who had never seen any wood but slight twigs and stunted heath, its immense planks and masts were objects of amazement. What animal, they also asked, could furnish those enormous *skins* which were spread for the sails. Their admiration was soon followed by a desire to possess some of the objects which met their eyes, and with little ceremony or discrimination as to the means of effecting their end. They attempted first a spare topmast, then an anchor; and these proving too ponderous, one of them tried the smith's anvil; but, finding it fixed, made off at last with the large hammer. It was not less wonderful in their eyes to see the sailors mounting the rigging; nor was it without much hesitation that they ventured their own feet in the shrouds. A little terrier-dog appeared to them a contemptible creature, wholly unfit for drawing burdens or being yoked in a sledge, while the grunt of a hog filled them with alarm.

Inquiries respecting the ship.

Native cupidity.

This tribe, in features, form, and even language, belong evidently to the Esquimaux,—a race widely diffused over all the shores of the Arctic Ocean. They appear to have little or no communication with the rest, and amid the general resemblance have some distinguishing characters. The boat, large or small, which we almost instinctively associate with our idea of the Greenlander, is here wholly unknown. Much of their food is found in the deep, and procured at various parts of the icy surface which incrusts it during the greater part of the year. Yet they have one important advantage, not only over other Esquimaux, but over the most civilized of the native Americans. Their country affords iron, which, being flattened by sharp stones, and inserted in a handle made of the horn of the sea-unicorn, forms knives much more efficient than those framed of bone by the neighbouring hordes. Again, unlike the other tribes, they have a king, who rules seemingly with

Esquimaux.

Possession of iron.

CHAP. VII.

Form of government.

gentle sway; for they described him as strong, very good, and very much beloved. The discoverers did not visit the court of this Arctic potentate; but they understood that he draws a tribute, consisting of train-oil, seal-skins, and the bone of the sea-unicorn. Following the general usage, they have sledges drawn by large and

Dog sledges.

powerful teams of dogs; their chase is chiefly confined to hares, foxes of various colours, the seal, and the narwal. They rejected with horror the proffered luxuries of biscuit, sweetmeats, or spirits; train-oil, as it streamed from various species of fish, alone gratified their palate. Captain Ross, swayed by national impressions, gave to this district the name of the *Arctic Highlands*.

Red snow.

In the northern part of this coast the navigators observed a remarkable phenomenon,—a range of cliffs, the snowy covering of which had exchanged its native white for a tint of deep crimson. This red snow was not only examined on the spot, but a portion of it was brought to England, and analyzed by the most learned men both at home and abroad, who have entertained various opinions as to the origin of the colour. The latest observations, as elsewhere observed, have established its vegetable origin.*

Cape Dudley Digges.

Having now passed Cape Dudley Digges, the commodore found himself among those spacious sounds which Baffin had named, but so imperfectly described. They all appeared to him, however, to be either bays enclosed by land or obstructed by impenetrable barriers of ice. He sailed past Wolstenholme and Whale Sounds very quickly, without approaching even their entrance; concluding them to be blocked up with ice, and to afford no hope of a passage. As these openings stretched towards the north, it must be admitted that they could

Smith's Sound.

not in this high latitude be considered very favourable as to the object he had in view. He came next to Sir Thomas Smith's Sound, which, we may recollect, Baffin described as the most spacious in the whole circuit of

* See chap. i p. 22, note; chap ii. p. 91-94.

these coasts. This was regarded with greater attention; but Captain Ross satisfied himself that he had distinctly seen it, at the distance of eighteen leagues, completely enclosed by land. He soon arrived at an extensive bay, which had hitherto been unobserved,—afterwards to that which Baffin called Alderman Jones' Sound; but in respect to both, the ice at their entrance, and the apparent boundary of high land in the interior, led, as in the other instances, to an unfavourable conclusion.

Conclusion of Captain Ross

The season was now somewhat advanced; the end of August approached; the sun set after an uninterrupted day of two months and a half; and a thick fog rendered the lengthening nights more gloomy. The land, seen at some distance, consisted of very high and steep hills, presenting, however, some spots fit for human habitation. An opening forty-five miles wide, to the southward of a promontory which was named Cape Charlotte, was decided against on the usual grounds. On the 30th August, the expedition came to a most magnificent inlet, bordered by lofty mountains of peculiar grandeur, while the water, being clear and free from ice, presented so tempting an appearance, that it was impossible to refrain from entering. This channel, which soon proved to be Lancaster Sound, was ascended for thirty miles; during which run officers and men crowded the topmast, filled with enthusiastic hope, and judging that it afforded a much fairer prospect of success than any of those so hastily passed. Captain Ross, however, soon thought that he discovered a high ridge stretching directly across the inlet; and, though a great part of it was deeply involved in mist, a passage in this direction was by him judged to be hopeless. The sea being open, however, the commander proceeded; but about twelve o'clock Mr Beverley, the assistant-surgeon, came down from the crow's nest, and stated, that he had seen the land extending very nearly across the entire bay. Hereupon, it is said, all hopes were renounced, even by the most sanguine, and Captain Ross sailed onward merely for the purpose of making some magnetical observations.

Close of the season.

Lancaster Sound.

Inclosing land.

CHAP. VII.

Change of course.

At three o'clock, the sky having cleared, the commander himself went on deck, when he states that he distinctly saw across the bottom of the bay a chain of mountains, continuous and connected with those which formed its opposite shores. The weather then becoming unsettled, he made the signal to steer the vessels out of Lancaster Sound.

Sail southward.

On regaining the entrance of this great channel, Captain Ross continued to steer southward along the western shore, without seeing any entrance which afforded equal promise. Cumberland Strait alone was similar in magnitude; but as it could lead only into the higher latitudes of Hudson's Bay, it afforded little chance of a passage into the Arctic Sea. After surveying, therefore, some of these shores, he returned home early in October.

Return to England.

The captain arrived in England under the most decided conviction that Baffin's observations had been perfectly correct, and that Lancaster Sound was a bay, affording no entrance into any western sea. If even any strait existed between the mountains, it must, he conceived, be for ever innavigable, on account of the ice with which it is filled. The intelligent individuals, however, who had fitted out the ships with such zeal and on so great a scale, felt dissatisfaction at this conclusion, as connected at least with the premises from which it was drawn. The grounds, in particular, on which Lancaster Sound, an opening so spacious, and in a position so favourable in respect to western discovery, had been so abruptly quitted, appeared inadmissible.

Opinion of Parry.

The same opinion was very decidedly espoused by several of the officers, and especially by Lieutenant Parry, the second in command. It was determined, in short, that a fresh expedition should be equipped and intrusted to him, that he might fulfil, if possible, his own sanguine hopes and those of the government. He was furnished with the Hecla of 375 tons, and a crew of fifty-eight men; and with the Griper gun-brig of 180 tons, and thirty-six men, commanded by Lieutenant Liddon.

These ships were made as strong as possible for the navigation of the Arctic Seas; and were stored with ample provisions for two years, a copious supply of antiscorbutics, and every thing which could enable the crews to endure the most extreme rigours of a Polar winter. CHAP. VII. Fresh expedition.

Lieutenant Parry, destined to outstrip all his predecessors in the career of northern discovery, weighed anchor at the Nore on the 11th May 1819, and on the 20th rounded the remotest point of the Orkneys. He endeavoured to cross the Atlantic about the parallel of 58°, and though impeded during the first fortnight of June by a series of unfavourable weather, obtained on the 15th, from the distance apparently of not less than forty leagues, a view of the lofty cliffs composing Cape Farewell. On the 18th the ships first fell in with icebergs, the air being also filled with petrels, kittiwakes, terns, and other winged inhabitants of the northern sky. He now made an effort to push north and west, through the icy masses, in the direction of Lancaster Sound; but these suddenly closed upon him; and on the 25th both vessels were so immovably beset that no power could turn their heads a single point of the compass. They remained thus fixed, but safe, when, on the morning of the second day, a heavy roll of the sea loosened the ice, and drove it against them with such violence, that only their very strong construction saved them from severe injury. The discoverers therefore were fain to extricate themselves as soon as possible; and, resigning the idea of reaching Lancaster Sound by the most direct course, resolved to steer northward along the border of this great icy field till they should find open water. In this progress they verified the observation of Davis, that in the narrowest part of the great sea, misnamed his Strait, the shores on each side could be seen at the same moment. Thus they proceeded till they reached the Women's Islands and Hope Sanderson, in about latitude 73°. As every step was now likely to carry them farther from their destination,

Departure of Parry.

Closing of the ice.

Change of course.

CHAP. VII.

Daring passage through the ice.

Parry determined upon a desperate push to the westward. Favoured with a moderate breeze, the ships were run into the detached pieces and floes of ice, through which they were heaved with hawsers; but the obstacles becoming always more insuperable, they were at length completely beset, and a heavy fog coming on made them little able to take advantage of any favourable change. Yet in the course of a week, though repeatedly and sometimes dangerously surrounded, they warped their way from lane to lane of open water, till only one lengthened floe separated them from an open sea. By laboriously sawing through this obstruction, they finally penetrated the great barrier, and saw the shore, clear of ice, extending before them.

Lancaster Sound reached.

The navigators now bore directly for Lancaster Sound, and on the 30th July found themselves at its entrance. They felt an extraordinary emotion as they recognised this magnificent channel, with the lofty cliffs by which it was guarded, aware that a very short time would decide the fate of their grand undertaking. They were tantalized, however, by a fresh breeze coming directly down the Sound, which did not suffer them to make more than a very slow progress. Still there was no appearance of obstruction, either from ice or land, and even the heavy swell which they had to encounter, driving the water repeatedly in at the stern-windows, was hailed as an indication of open sea to the westward. The Hecla left the Griper behind, but still without making any great way herself, till the 3d August, when an easterly breeze sprung up, carrying both vessels rapidly forward. A crowd of sail was set, and they proceeded triumphantly in their course. The minds of all were filled with anxious hope and suspense. The mast-heads were crowded with officers and men, and the successive reports brought down from the highest pinnacle, called the crow's nest, were eagerly listened to on deck. Their path was still unobstructed. They passed various headlands, with several wide openings towards the north and south, to

High hopes entertained

which they hastily gave the names of Croker Bay, Navy Board Inlet, and similar designations; but those it was not their present object to explore. The wind, freshening more and more, carried them happily forward, till at midnight they found themselves in longitude 83° 12′, nearly a hundred and fifty miles from the mouth of the sound, which still retained a breadth of fifty miles. The success of the expedition, they fondly hoped, was now to a great extent decided.

Openings passed.

The Hecla at this time slackened her course to allow her companion to come up, which she did in longitude 85°. They proceeded together to longitude 86° 30′, and found two other inlets, which they named Burnet and Stratton; then a bold cape named Fellfoot, forming, apparently, the termination of this long line of coast. The lengthened swell which still rolled in from the north and west, with the oceanic colour of the waters, inspired the flattering persuasion that they had already passed the region of straits and inlets, and were now wafted along the wide expanse of the Polar Basin. Nothing, in short, it was hoped, would henceforth obstruct their progress to Icy Cape, the western boundary of America. An alarm of land was given, but it proved to arise only from an island of no great extent. However, more land was soon discovered beyond Cape Fellfoot, which was ascertained to be the entrance to a noble recess, extending on their right, which they named Maxwell Bay. An uninterrupted range of sea still stretched out before them, though they were somewhat discomposed by seeing on the south a line of continuous ice; but it left an open passage, and they hoped to find it merely a detached stream. A little space onwards, however, they discovered, with deep dismay, that this ice was joined to a compact and impenetrable body of floes, which completely crossed the channel, and joined the western point of Maxwell Bay. It behoved them, therefore, immediately to draw back, to avoid being embayed in the ice, along the edges of which a violent surf was then beating. The officers

Junction of the Hecla and Gripe.

Appearance of land.

Channel obstructed

CHAP. VII.

New course.

began to amuse themselves with fruitless attempts to catch white whales, when the weather cleared, and they saw to the south an open sea with a dark water-sky. Parry, hoping that this might lead to an unencumbered passage in a lower latitude, steered in this direction, and found himself at the mouth of a great inlet, ten leagues broad, with no visible termination; and to the two capes at its entrance he gave the names of Clarence and Seppings.

Desolate scene.

The mariners, finding the western shore of this inlet greatly obstructed with ice, moved across to the eastern, where they entered a broad and open channel. The coast was the most dreary and desolate they had ever beheld even in the Arctic world, presenting scarcely a semblance either of animal or vegetable life. Navigation was rendered more arduous from the entire irregularity of the compass, now evidently approaching to the magnetic pole, and showing an excess of variation which they vainly attempted to measure, so that the binnacles were laid aside as useless lumber. They sailed a hundred and twenty miles up this inlet, and its augmenting width inspired them with corresponding hopes; when, with extreme consternation, they suddenly perceived the ice to diverge from its parallel course, running close in with a point of land which appeared to form the southern extremity of the eastern shore. To this foreland they gave the name of Cape Kater. The western horizon also appeared covered with heavy and extensive floes, a bright and dazzling iceblink extending from right to left. The name of the Prince Regent was given to this spacious inlet, which Parry strongly suspected must have a communication with Hudson's Bay. He now determined to return to the old station, and watch the opportunity when the relenting ice would allow the ships to proceed westward. That point was reached, not without some difficulty, amid ice and fog. At Prince Leopold's Islands, on the 15th, the barrier was as impenetrable as ever, with a bright blink; and from the top of a high hill there was no water to be

Renewed hopes.

Prince Regent's Inlet.

seen; luckily also there was no land. On the 18th, on getting once more close to the northern shore, the navigators began to make a little way, and some showers of rain and snow, accompanied with heavy wind, produced such an effect, that on the 21st the whole ice had disappeared, and they could scarcely believe it to be the same sea which had just before been covered with floes upon floes as far as the eye could reach.

Sudden change.

Mr Parry now crowded all sail to the westward, and, though detained by want of wind, he passed Radstock Bay, Capes Hurd and Hotham, and Beechey Island; after which he discovered a fine and broad inlet leading to the north, which he called Wellington, the greatest name of the age. The sea at the mouth being perfectly open, he would not have hesitated to ascend it, had there not been before him, along the southern side of an island named Cornwallis, an open channel leading due west. Wellington Inlet was now considered by the officers, so high were their hopes, as forming the western boundary of the land stretching from Baffin's Bay to the Polar Sea, into which they had little doubt they were entering. For this reason Lieutenant Parry did not hesitate to give to the great channel, which was understood to effect so desirable a junction, the merited appellation of Barrow's Strait, after the much-esteemed promoter of the expedition. A favourable breeze now sprung up, and the adventurers passed gaily and triumphantly along the extensive shore of Cornwallis Island, then coasted a larger island named Bathurst, and next a smaller one called Byam Martin. At this last place they judged by some experiments that they had passed the magnetic meridian, situated probably in about 100 degrees west longitude, and where the compass would have pointed due south instead of due north. The navigation now became extremely difficult, in consequence of thick fogs, which not only froze on the shrouds, but, as the compass was also useless, took away all means of knowing the direction in which they sailed. They were obliged to trust that the land and

Voyage westward.

Barrow's Strait.

The magnetic meridian

CHAP. VII

Novel difficulties.

ice would preserve the same line, and sometimes employed the oddest expedients for ascertaining the precise point. They encountered also a compact floe, through which they were obliged to bore their way by main force. Notwithstanding all these obstacles they reached the coast of an island larger than any before discovered, to which they gave the name of Melville. The wind now failed, and they moved slowly forward by towing and warping, till on the 4th September the lieutenant could announce to his joyful crew, that, having reached the longitude of 110° W., they were become entitled to the reward of £5000, promised by Parliament to the first ship's company who should attain that meridian. They still pushed forward with redoubled ardour, but soon found their course arrested by an impenetrable barrier of ice. They waited nearly a fortnight in hopes of overcoming it; till, about the 20th, their situation became alarming. The young ice began rapidly to form on the surface of the waters, retarded only by winds and swells; so that the commanding officer was convinced that, in the event of a single hour's calm, he would be frozen up in the midst of the sea. No option was therefore left but to return, and to choose between two apparently good harbours, which had been recently passed on Melville Island. Not without difficulty he reached this place on the 24th, and decided in favour of the more western haven, as affording the fullest security; but it was necessary to cut his way two miles through a large floe with which it was encumbered. To effect this arduous operation, the seamen marked with boarding-pikes two parallel lines, at the distance of somewhat more than the breadth of the larger ship. They sawed, in the first place, along the path tracked out, and then by cross-sawings detached large pieces, which were separated diagonally in order to be floated out; and sometimes boat-sails were fastened to them to take the advantage of a favourable breeze. On the 26th the ships were established in five fathoms water, at about a cable's length from the beach.

Success of the expedition.

Compelled to return.

Difficulties overcome.

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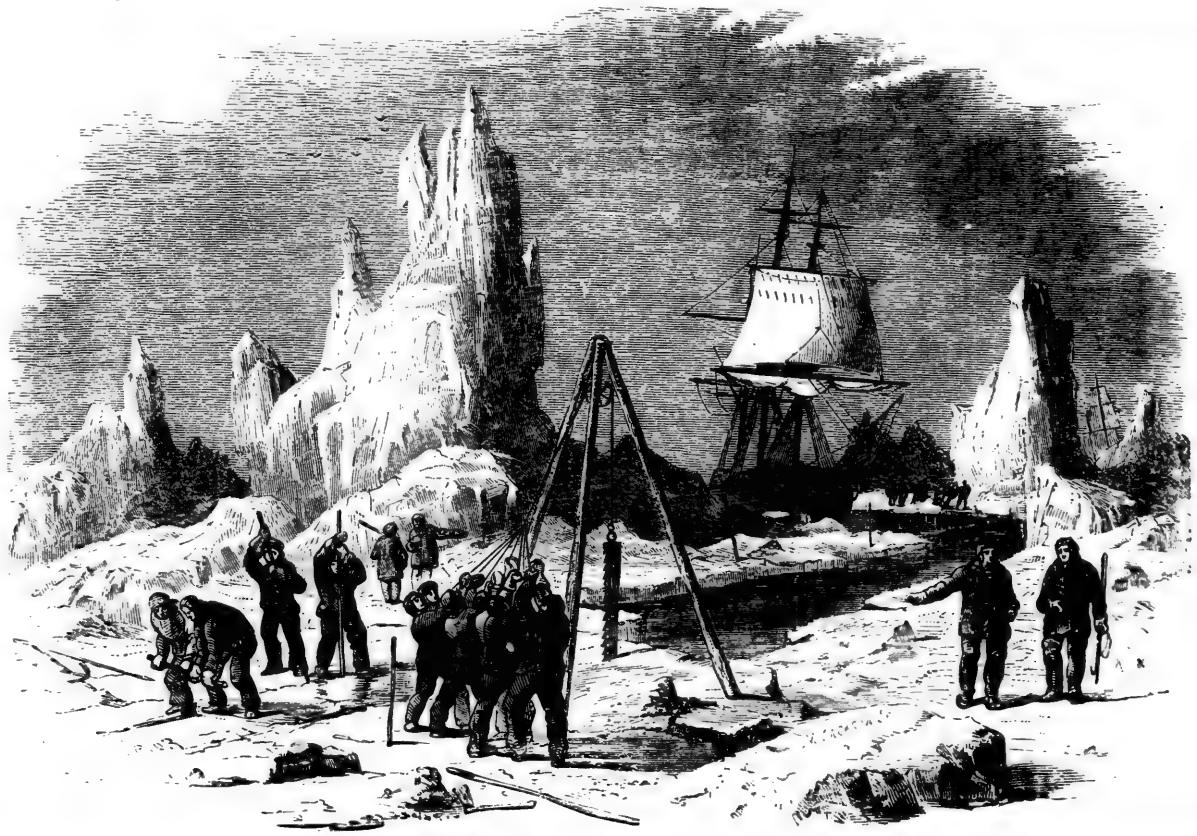


CUTTING INTO WINTER QUARTERS.

It was necessary to cut his way two miles through a large floe. . . . . They sawed along the path tracked out.—Page 226.

CUTTING INTO WINTER QUARTERS.

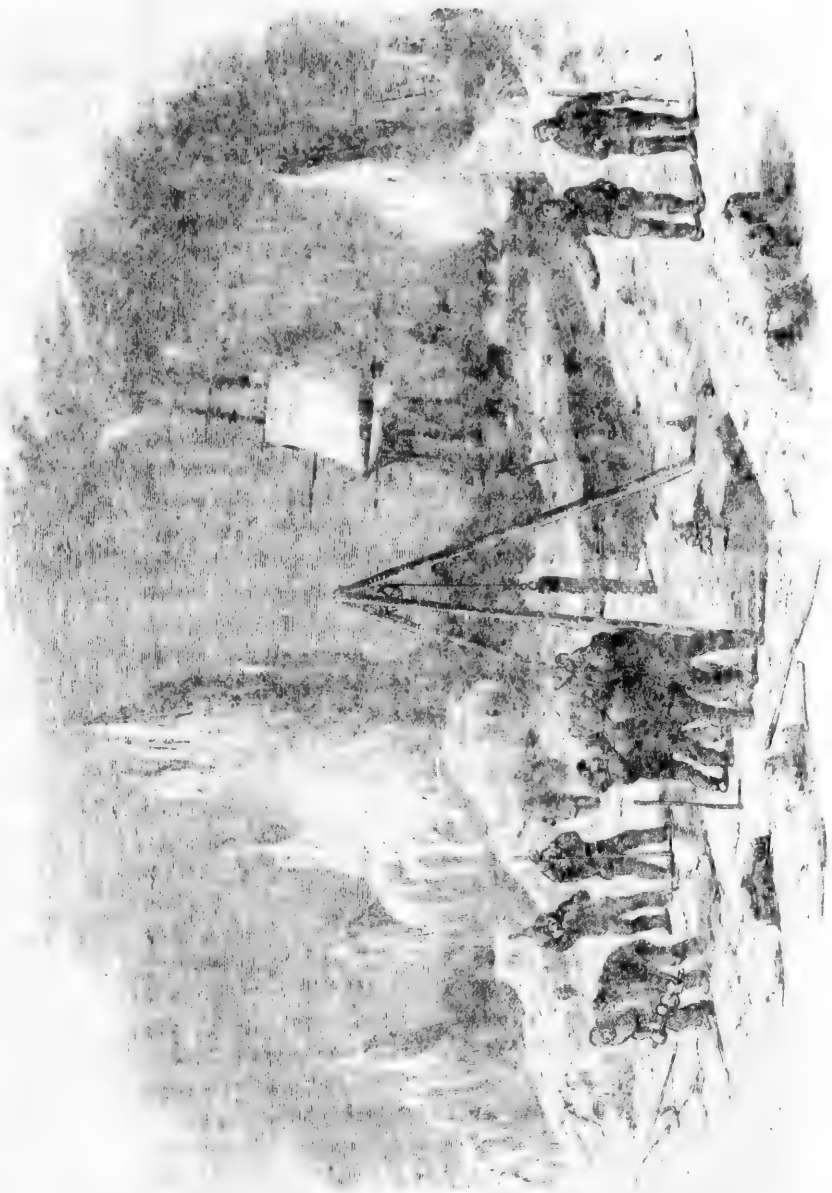
It was necessary to cut his way two miles through a large floe. . . . They sawed along the path tracked out.—Page 226.

For some time the ice was daily cleared round them; but this was soon found an endless and useless labour, and they were allowed to be regularly frozen in for the winter. CHAP. VII. Frozen in for the winter.

Mr Parry then applied himself to name the varied group of islands along which he had passed. He called them at first New Georgia; but, recollecting that this appellation was pre-occupied by one in the Pacific, he gave the title of "the North Georgian Islands," in honour of his Majesty George III., whose reign had been so eminently distinguished by the extension of nautical and geographical knowledge. Names of the islands.

The commander, finding himself and his ships shut in for a long and dreary winter, devoted his attention, with a mixture of firmness and kindness, to mitigate those evils which, even in lower latitudes, had often rendered an abode in the Arctic regions so fatal. His provisions being very ample, he substituted for a pound of salt beef weekly a pound of Donkin's preserved meat, and a pint of concentrated soup; beer and wine were regularly served instead of spirits; and a certain allowance was made of sour-krout, pickles, and vinegar. The sailors were also called together daily, and required to swallow a quantity of lime-juice and sugar in presence of the officers, their improvidence being such as to afford no other security for their imbibing this salutary draught. Their gums and shins were also carefully examined, in order to detect scurvy in its earliest symptoms. It was necessary to be very economical of fuel, the small quantity of moss and turf which could be collected being too wet to be of any use. By placing the apparatus for baking in a central position, and by several other arrangements, the cabin was maintained in a very comfortable temperature; but still, around its extremities and in the bed-places, steam, vapour, and even the breath, settled, first as moisture and then as ice. To remove these annoyances became accordingly a part of their daily employment. Judicious firmness of the commander. Preventive precautions.

From the first, Mr Parry was aware that nothing acted



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Judicious firmness of the commander.

Preventive precautions.

From the first, Mr Parry was aware that nothing acted

CHAP. VII.

Dramatic recreations.

more strongly as an antiscorbutic, than to keep the men's minds in a lively and cheerful state. His plans for this purpose were very original, and proved not less effectual. Arrangements were made for the occasional performance of a play, in circumstances certainly very remote from any to which the drama appeared congenial. Lieutenant Beechey was nominated stage-manager, and the other gentlemen came forward as amateur performers. The very expectation thus raised among the sailors, and the bustle of preparing a room for the purpose, were extremely beneficial; and when the North Georgian Theatre opened with "Miss in her Teens," these hardy tars were convulsed with laughter; not a little excited, perhaps, by viewing their officers in so singular and novel a position; at all events, the Arctic management was extremely popular. As the small stock contained in one or two chance volumes was exhausted, original compositions were produced, and afterwards formed into a little collection. The officers had another source of amusement in the North Georgian Gazette, of which Captain Sabine became editor, and all were invited to contribute to this chronicle of the frozen regions. Even those who hesitated to appear as writers, enlivened the circle by severe but good-humoured criticisms :—

North Georgian Theatre.

North Georgian Gazette.

> Thus pass'd the time
> Till, through the lucid chambers of the south,
> Look'd out the joyous *Sun*.

Disappearance of the sun.

It was on the 4th November that this great orb ought to have taken his leave; but a deep haze prevented them from bidding a formal farewell, and from ascertaining the period down to which refraction would have rendered him visible; yet he was reported to be seen from the mast-head on the 11th. Amid various occupations and amusements, the shortest day came on almost unexpected, and the seamen then watched with pleasure the twilight gradually strengthening at noon. On the 28th January none of the fixed stars could be seen at that hour by the naked eye; and on the 1st and 2d of February the sun was looked for, but the sky was wrapped

in mist; however, on the 3d he was perceived from the maintop of the Hecla. Throughout the winter, the officers, at the period of twilight, had taken a regular walk of two or three hours; not proceeding, however, farther than a mile, lest they should be overtaken by snow-drift. There was a want of objects to diversify this promenade. A monotonous surface of dazzling white covered land and sea; the view of the ships, the smoke ascending from them, the sound of human voices, which through the calm and cold air was carried to an extraordinary distance, alone gave any animation to this wintry scene. The officers, however, persevered in their daily excursion, and exercise was also enforced upon the men, who, even when prevented by the weather from leaving the vessel, were made to run round the deck, keeping time to the tune of an organ. This movement they did not at first entirely relish; but, no plea against it being admitted, they converted it at last into matter of frolic.

Re-appearance of the sun.

Dreary scene.

By the above means health was maintained on board the ships to a surprising degree. Early in January, however, Mr Scallon, the gunner, felt symptoms, first in the legs and then in the gums, that decidedly indicated the presence of scurvy, of which the immediate cause appeared to be the great collection of damp that had formed around his bed-place. At this alarm, all the antiscorbutics on board, lemon-juice, pickles, and spruce-beer, were put into requisition; a small quantity of mustard and cress was also raised from mould placed over the stove-pipe; and such was the success of these remedies, that in nine days the patient could walk without pain. Farther on in the season a number of slighter cases occurred, which were somewhat aggravated by an accident. As the men were taking their musical perambulation round the deck, a house erected on shore, and containing some of the most valuable instruments, was seen to be on fire. The crew instantly ran, pulled off the roof with ropes, knocked down a part of the sides, and being thus enabled to throw in large quantities

Threat of disease.

Danger from fire.

CHAP. VII

Effect of frost.

of snow, succeeded in subduing the flames. Now, however, their faces presented a curious spectacle, every nose and cheek being white with frost-bites, while the medical gentlemen, with their assistants, were obliged to run from one to the other, and rub them with snow in order to restore animation. With one man the amputation of several fingers became necessary, and no less than sixteen were added to the sick-list.

Disappearance of animals.

The animal tribes disappeared early in the winter from this frozen region. The officers, on the 15th October, made a shooting-excursion, enjoying a very fine day, though with the thermometer 47° below the freezing-point; but they did not find a deer, a grouse, nor any creature that could be ranked as game. All of them, deserting this wintry realm, had crossed the seas to America. There remained only a pack of wolves, which serenaded the crews nightly, not venturing to attack,

Wolves.

but contriving to avoid being captured. A beautiful white fox was caught and made a pet of. On the 12th May one of the men gave notice that he had seen a ptarmigan; and attention being thus excited, Mr Be-

Ptarmigan shot.

verley next morning shot one, and on the 15th three coveys presented themselves. The footsteps of deer were also seen, which, from the impression made on the snow, seemed to be moving northwards. From this time ptarmigans were supplied in considerable numbers; but they were made strictly a common good, being divided equally among the crew, with only a preference in favour of the sick. There was found, also, mixed with moss under the snow, an abundance of the herb sorrel, a most potent antidote against scurvy. By these supplies, and under the influence of the more genial weather, the health of the crew, which at the end of March had been in a somewhat alarming state, was completely restored

Snow blindness.

before the beginning of June. In extending their excursions, however, they were considerably incommoded by that distressing inflammation of the eyes, which, proceeding from the glare of snow, is called snow-blindness. It was cured in a few days by cold applications,

while, for the future, it was prevented by covering the eyes, or by wearing spectacles, in which crape was used instead of glass.

Active work resumed.

On the 16th March the North Georgian Theatre was closed with an appropriate address, and the general attention was now turned to the means of extrication from the ice. By the 17th May the seamen had so far cut it from around the ships as to allow them to float; but in the sea it was still immovable. This interval of painful inaction was employed by Mr Parry in an excursion across Melville Island. The ground was still mostly covered with softened snow, and even the cleared tracts were extremely desolate, though chequered by patches of fine verdure. Deer were seen traversing the plains in considerable numbers. Towards the north appeared another island, to which was given the name of Sabine. By the middle of June pools were every where formed; the water flowed in streams, and even in torrents, which rendered hunting and travelling unsafe. There were also channels in which boats could pass; yet throughout this month and the following the great covering of ice in the surrounding sea remained entire, and kept the ships in harbour. On the 2d of August, however, the whole mass, by one of those sudden movements to which it is liable, broke up and floated out; and the explorers had now open water in which to prosecute their great object. It was consolatory to think that this was the very season at which they had last year entered Lancaster Sound; and if they could make as brilliant a voyage this summer, the following one would see them not far from Behring's Straits. But it was not without some obstructions that on the 4th they reached the same spot where their progress had been formerly arrested. On the 15th they were enabled to make a certain advance; after which the frozen surface of the ocean assumed a more compact and impenetrable aspect than had ever before been witnessed. The officers ascended some of the lofty heights which bordered the coast; but, in a long reach of sea to the westward, no

Appearance of deers.

Breaking up of the ice.

CHAP. VII

Impediments to further procedure.

boundary was seen to these icy barriers. There appeared only the western extremity of Melville Island, named Cape Dundas; and in the distance a bold coast, which they named Banks' Land. As even a brisk gale from the east did not produce the slightest movement on the glassy face of the deep, they were led to believe that on the other side there must be a large body of land, by which it was held in a fixed state. On considering all circumstances, there appeared no alternative but to make their way homeward while yet the season permitted. Some additional observations were made, as they returned, on the two coasts extending along Barrow's Strait.

Return to Britain.

Mr Parry's arrival in Britain was hailed with the warmest exultation. To have sailed upwards of thirty degrees of longitude beyond the point reached by any former navigator,—to have discovered so many new lands, islands, and bays,—to have established the much-contested existence of a Polar Sea north of America,—finally, after a wintering of eleven months, to have brought back his crew in a sound and vigorous state,*—were enough to raise his name above that of any other Arctic voyager.

Fresh expedition

No hesitation was felt as to sending out another expedition; but, considering the insuperable nature of the obstacles which had twice arrested the progress of the last, it became important to consider whether there was not any other passage by which the Polar Sea, now ascertained to exist, might be reached with greater facility. In Hudson's Bay neither of the great northern sounds called the Welcome and Fox's Channel had been traced to a termination. Middleton, in the former inlet, had ascended higher than any previous discoverer; but a thick cloud had been raised around his reputation, and his *Frozen Strait*, after all, might very likely prove to

* Only one man died in the course of their long and perilous voyage, and his disease was no way referable to the toils or privations of the expedition, the origin of his malady having been of a date anterior to the sailing of the ships.

be only a temporary barrier. If from either of these sounds an opening should be effected into the Arctic Sea, it could be navigated in a much lower latitude than that in which Parry had wintered, and might perhaps be also free from those large islands among which he had been entangled. There was accordingly fitted out a new expedition, in which the Fury, of 327 tons, was conjoined with the Hecla; the commander conceiving that two vessels of nearly equal dimensions were best calculated for co-operating with each other, while the examination of coasts and inlets could be carried on by boats. This active officer, now promoted to the rank of captain, hoisted his flag on board the Fury; while Captain Lyon, already distinguished by his services in Africa, received the command of the Hecla, and proved himself fully competent to the arduous duties of this new service. The equipment, the victualling, and the heating of the vessels, were all accomplished with the greatest care, and with various improvements suggested by experience.

Anticipations of a western passage.

Fury and Hecla.

The adventurers were ready to sail on the 8th May 1821, and having then quitted the Nore, passed through the Pentland Frith and by Cape Farewell, though not without suffering repeated detention; but we shall not pause till we find them, on the 2d July, at the mouth of Hudson's Strait. Captain Parry, accustomed as he was to views of Polar desolation, was struck with the exceedingly dreary aspect which these shores presented. The naked rocks, the snow still covering the valleys, and the thick fogs that hung over them, rendered the scene indescribably gloomy. The ships were soon surrounded by icebergs, amounting to the number of fifty-four,—one of which rose at least 258 feet above the sea. They were attended by large floes, and rendered very formidable by their rotatory motion. The peculiar danger of these straits, often remarked by former navigators, arises from the strong tides and currents that rush in from the ocean, and cause violent movements among the huge masses of ice with which they are usually filled. Captain Lyon had an alarming proof of their strength;

Departure of the expedition

Icebergs.

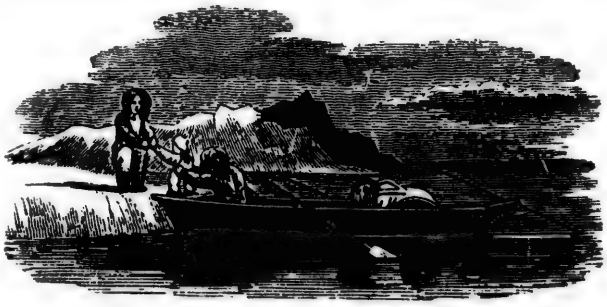
CHAP. VII.

Strength of the ice.

for two of his hawsers were carried away, and the best bower anchor, weighing more than a ton, was wrenched from the bows, and broken off as if it had been crockery-ware. During these disasters the sailors were amused by the sight of three companion-ships, two belonging to the Hudson's Bay Company, and one bringing out settlers for Lord Selkirk's colony. The emigrants on board the last, who were chiefly Dutch and Germans, were seen waltzing on deck often for hours together, and were only driven into their cabins by a severe fall of snow.

Slow progress.

Amid these obstructions the ships spent nineteen days in making seventy miles; which course, however, brought them, on the 21st, within two leagues of what are called the Savage Islands. On the following afternoon a loud shouting was heard over the ice, and soon after there appeared a numerous band of natives, paddling their canoes through the lanes of open water, or, where these failed, drawing them over the pieces of ice. Among a great number of *kayaks*, or boats rowed by a single man (see plate p. 178), were five *oomiaks*, or women's



Oomiak, or Woman's Boat.

Women's boats.

boats, constructed of a framework of wood and whalebone covered with deer-skins, having flat sides and bottom, and of considerable size. One of them, 25 feet by 8, contained women, boys, and young children, to the number of twenty-one. Presently began a merry, noisy scene of frolic and traffic. The natives carried it on with eagerness and even fury, stripping themselves of the very skins which formed their only covering, till

they were in a state of absolute nudity, except the ladies, who always made a laudable reservation of their breeches. They drove what they meant should be an excessively hard bargain; yet, being wholly ignorant of the value of the rich skins with which nature has invested the animals of this climate, they raised shouts of triumph when they obtained in exchange a nail, a saw, or a razor. Their aspect was wilder and more dishevelled than that of any other tribe even among this rude race; their character also seems fiercer and more savage; and indeed it is in this quarter that most of the tragical encounters with Esquimaux have occurred. Some of the old women were pronounced to be the most hideous objects that mortal man ever beheld; inflamed eyes, wrinkled skin, black teeth, and deformed features, rendered them scarcely human; hence much apology was found for the dark suspicions cherished by Frobisher's crew respecting one of these dames, and the odd investigation to which it had prompted. The children were rather pretty; though, from being thrown carelessly into the bottom of the boats, they had much the appearance of the young of wild animals. Besides traffic, the barbarians indulged in a great deal of rather rude frolic, like that of ill-regulated schoolboys. One of them got behind a sailor, shouted loudly in one ear, and gave him a hearty box on the other, which was hailed with a loud and general laugh. They also displayed their merriment in a dance, consisting chiefly of violent leaping and stamping, though in tolerable time.

Barter with the natives.

Old native women

In spite of every obstruction, Captain Parry, early in August, reached the entrance of Fox's Channel, and came in view of Southampton Island. It was now the question, whether to sail directly up this inlet, and reach, by a comparatively short route, Repulse Bay and the higher latitudes, or to make the south-western circuit of Southampton Island, and ascend the beaten track of the Welcome. The captain judiciously preferred the former, notwithstanding its uncertainties, on account of the great time which would be saved should the course

Fox's Channel.

CHAP. VII

Course adopted.

be found practicable. On the 15th he came to an opening stretching westward, and apparently separating the island from other land on the north. Hoping to find this the Frozen Strait of Middleton, he entered it; but it soon proved a spacious and beautiful basin, enclosed by land on every side. He named it the Duke of York's Bay, and considered it one of the finest harbours in the world; but, after admiring a large floe covered entirely with minerals, shells, and plants, he moved out of it, and pursued the voyage. On the 21st the navigators found themselves in another strait, not much encumbered with ice, but darkened by thick fogs; and, before they knew distinctly where they were, a heavy swell from the southward showed that they had already passed through the Frozen Strait, and were in the broad channel of the Welcome. They speedily entered Repulse Bay, in which modern speculation had cherished the hope of a passage; but a short investigation made by boats in every direction proved that it was really, as Middleton had described it, completely enclosed. A good deal of time had thus been lost through the scepticism so unjustly attached to the narrative of that eminent seaman.

Repulse Bay

Course of discovery.

Captain Parry, having come with all speed out of Repulse Bay, began the career of discovery along a coast hitherto unknown. An inlet was soon observed, and called by the name of Gore; but was not found to extend far into the interior. At the mouth of this opening the valleys were richly clad with grass and moss, the birds singing, butterflies and other insects displaying the most gaudy tints, so that the sailors might have fancied themselves in some happier climate, had not the mighty piles of ice in the Frozen Strait told a different tale. Hunting-parties traversed the country in various directions, and the game-laws of the preceding year were strictly enforced, by which every beast or bird was to be relinquished for the general good, allowing only the head and legs as a *douceur* to the captor. The latter, however, adopted and made good a theory,

agreeably to which the description *head* was greatly extended, so as to include even several joints of the back-bone.

Perils of the voyage.

Having passed Gore Inlet, the discoverers found themselves among those numerous isles described by Middleton, which formed a complete labyrinth of various shapes and sizes, while strong currents setting between them in various directions, amid fogs and drifting ice, rendered the navigation truly perilous. The Fury was assailed by successive masses; her anchor was dragged along the rocks with a grinding noise, and on being drawn up, the two flukes were discovered to be broken off. The same vessel was afterwards carried forward by a violent stream, amid thick mist, the people on board finding it impossible either to guide or alter her direction; so that Captain Parry considers it altogether providential that she was not dashed to pieces against the surrounding rocks. However, one channel, and one only, was observed, by which the mariners at last made their way through this perilous maze. No sooner had they reached the open sea, than, being obliged to run before a strong northerly breeze, they were much disheartened to find themselves, on the 3d of September, at the very point which they had left on the 6th of August. All the interval had been employed in the merely negative discovery, that there was nothing to discover.

Causes of delay.

The commander soon reached the northern coast, and resumed his task, which was rendered very tedious by the necessity of examining every opening and channel, in the hope that each might prove the desired passage into the Polar Ocean. He first explored a large inlet, the name of which he gave to Captain Lyon,—then a smaller one, which was named from Lieutenant Hoppner; and by connecting these with Gore Inlet, he completed his delineation of the coast. The seamen had again the pleasure of opening a traffic with a party of Esquimaux, whose first timidity was soon overcome by the hope of being supplied with some iron tools. In

CHAP. VII

Traffic with the natives.

Native thefts.

Winter set in.

Formation of ice.

the course of this transaction, the surprise of the crew was roused by the conduct of a lady, who had sold one boot, but obstinately retained the other, in disregard of the strongest remonstrances as to the ridiculous figure she in consequence made. At length suspicion rose to such a pitch, that, all courtesy being set aside, her person was seized, and the buskin pulled off. Then indeed it proved a complete depository of stolen treasure, there being no less than two spoons and a pewter-plate secreted within its capacious cavity.

The end of September now approached, and Captain Parry found himself suddenly in the depth of winter. Snow had been falling during the whole of the short summer; but the united warmth of the air and earth had melted it as it fell, and left the ground still open to the sun's rays. In one moment, as it were, it made good its lodgement, spreading its white and dazzling mantle over land and sea; and the solar beams being then no longer able to reach the soil, the whole became subject to permanent and impenetrable frost. Some parts of the snow were indeed dissolved, and then refrozen in varied and beautiful forms of crystallization; whereas at Melville Island the covering once spread over nature had never changed its aspect. A more alarming symptom appeared in the rapid formation of the soft or pancake ice on the surface of the deep. The obstacle thereby occasioned was at first so slight as to be scarcely felt by a ship before a brisk gale; but it continually increased, till at length the vessel, rolling from side to side, became like Gulliver bound by the feeble hands of Lilliputians. At the same time the various pieces of drift-ice, which were tossing in the sea without, had been cemented into one great field called "the ice," that threatened every moment to bear down upon the brigs, and dash them in pieces. Under this combination of circumstances, the navigators could no longer even attempt to reach the land, but determined to saw into the heart of an adjoining floe, and there take up their winter-quarters. There was about half a mile to penetrate,

Winter quarters.

which, in the soft state of the pancake-ice, was not very laborious. It was, however, far from pleasant, as it bended like leather beneath their feet, and caused them sometimes to sink into the water, whence it was impossible they could escape without a very cold bath.

Winter amusements.

Captain Parry was now frozen up for another winter in the midst of the Northern Sea, and he forthwith applied himself to make the necessary arrangements with that judicious foresight which had been already so conspicuous in the same trying circumstances. As the result of experience, not less than of several ingenious contrivances, the ships were much more thoroughly heated than in the former voyage; the provisioning, too, was more ample, and antidotes against scurvy still more copiously supplied. The Polar Theatre opened on the 9th November with "The Rivals." The two captains appeared as Sir Anthony and Captain Absolute; while those who personated the ladies had very generously removed an ample growth of beard, disregarding the comfortable warmth which it afforded in an Arctic climate. The company were well received, and went through their performances with unabated spirit; yet this season does not seem to have gone off quite with the same eclat as the preceding. Novelty, from the first the chief attraction, had worn off, and the discomfort of a stage, the exhibitions of which were attended with a cold thirty degrees under the freezing-point, became rather severe. The sailors found for themselves a more sober and useful, as well as efficacious remedy against *ennui*. They established a school, in which the better-instructed undertook to revive the knowledge of letters among those who had almost entirely lost the slight tincture that they had once imbibed. These hardy tars applied themselves to their book with ardent and laudable zeal, and showed a pride in their new attainments like that of little boys in their first class. At Christmas sixteen well-written copies were produced by those who, two months before, could scarcely form a letter. Amid these varied and pleasing occupations, the shortest day

School established.

CHAP. VII.

Celebration of Christmas.

passed over their heads almost unobserved, especially as the sun did not entirely leave them. Captain Lyon never saw a merrier festival than was celebrated on board. The sailors, being amply regaled with fresh beef, cranberry-pies, and grog, became so extremely elevated, that they insisted on drinking, with three hearty cheers, the health of each officer in succession.

Hares and foxes.

The animal creation in this less rigorous climate, even though the ground was completely frozen over, did not disappear so entirely as on Melville Island. A few solitary hares were caught; but they were in a miserable state of leanness, weighing only five or six pounds, and had a purely white covering, which resembled swan's down rather than hair. About a hundred white foxes were snared in the nets during the winter. These beautiful creatures, when first taken, were perfectly wild and ungovernable; but in a short time the young ones at least threw off this timidity. A delicate little quadruped entrapped one day proved to be an ermine; but it was excessively frightened, and to the general regret died soon afterwards.

Northern phenomena.

The winter months were also enlivened by various striking appearances which the sky at that season presented. The northern world, when the sun departs, is by no means involved in that monotonous gloom which such a privation might seem to indicate. After the solar beams have finally quitted the earth, and the long winter has closed in, the heavens become a gay scene, through which the most brilliant meteors are perpetually playing. Those singular streams of light, called commonly the *Aurora Borealis*, keep up an almost incessant illumination, and were frequently witnessed in full splendour by Captains Parry and Lyon during their Arctic residence. The light had a tendency to form an irregular arch, which, in calm weather, was often very distinct, though its upper boundary was seldom well defined; but, whenever the air became agitated, showers of rays spread in every direction, with the rapidity of lightning. Sometimes long streaks of light were spread

Aurora Borealis.

out with inconceivable swiftness, but always appearing to move to and from a fixed point, somewhat like a riband held in the hand and shaken with an undulatory motion. No rule, however, could be traced in the movement of those lighter parcels called "the merry dancers," which flew about perpetually towards every quarter; becoming in stormy weather more rapid in their motions, and sharing all the wildness of the blast. They gave an indescribable air of magic to the whole scene, and made it not wonderful that, by the untaught Indian, they should be viewed as "the spirits of his fathers roaming through the land of souls."

The merry dancers.

Several questions have been agitated with respect to the *Aurora*. It has been said to be accompanied with a hissing and cracking noise; and indeed Captain Lyon observes, that the sudden glare and rapid bursts of those wondrous showers of fire make it difficult to fancy their movements wholly without sound;—yet nothing was ever really heard. Captain Parry complains that he could not expose his ears to the cold long enough completely to ascertain the point; but his colleague declares that he stood for hours on the ice listening, and at a distance from every sounding body, till he became thoroughly satisfied that none proceeded from the *Aurora*. It has also been questioned whether this meteor ever completely hid the stars; and it was generally decided, on this occasion, that it dimmed the lustre of those heavenly bodies, as if a thin gauze veil had been drawn over them,—an effect which was augmented when several luminous portions were spread over each other. In a clear atmosphere these lights shone with a brightness which gave the impression that they were nearer than the clouds; but whenever these last overspread the sky the *Aurora* was hid by them, and must therefore have been more distant. To Captain Parry it appeared to assume tints of yellow and lilac; but to Captain Lyon its colour always resembled that of the Milky-Way, or of very vivid sheet-lightning. The present writer saw this phenomenon once, and only

Noise made by the Aurora.

Its opaqueness.

Its colour.

CHAP. VII.

once, in its utmost brilliancy, and exhibiting all the appearances described by these northern observers. His impressions agree perfectly with those of Captain Lyon.

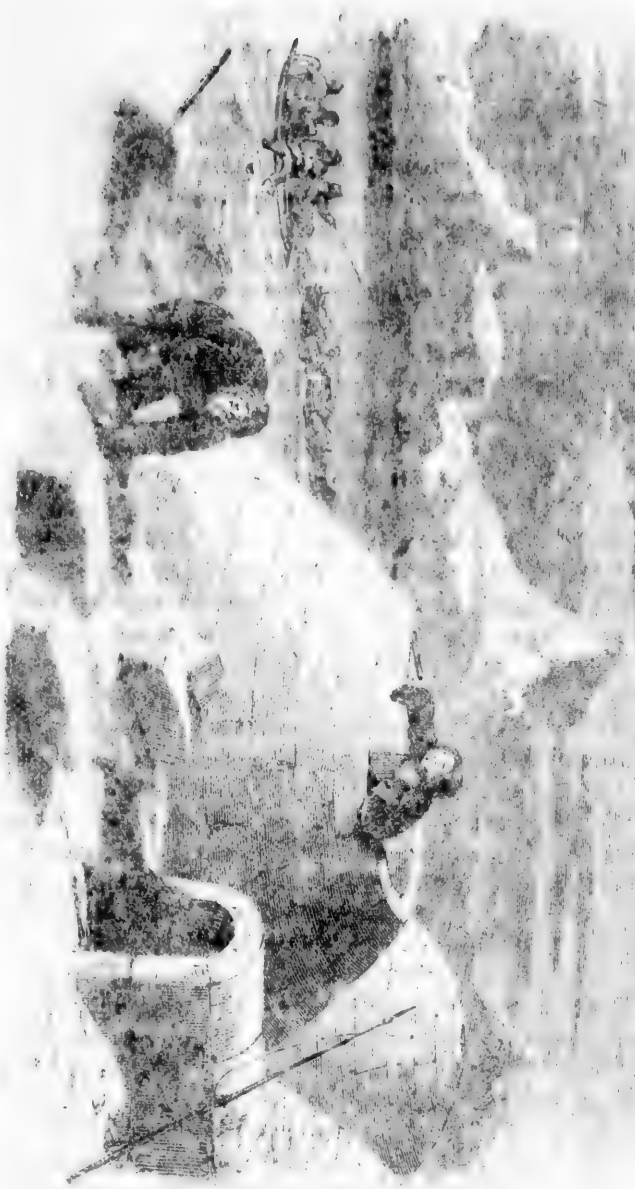
Luminous meteors

Other luminous meteors, arising apparently from the refraction caused by the minute and highly crystallized spiculæ of ice, appear in succession to embellish the northern sky. The sun and moon are often surrounded with halos,—concentric circles of vapour, tinted with the brightest hues of the rainbow. Parhelia, or mock suns, frequently adorned with these accompaniments, shine at once in different quarters of the firmament. Ellis, who was with Moor and Smith in Hudson's Bay, has seen six at the same moment. They are most brilliant at daybreak, diminish in lustre as the sun ascends, but again brighten at his setting. The solar orb itself, for some time before it finally departs for the winter, and also after its reappearance in spring, tinges the sky with hues of matchless splendour. The edges of the clouds near that luminary often present a fiery or burnished appearance, while the opposite horizon glows with a deep purple, gradually softening as it ascends into a delicate rose-colour of inconceivable beauty. As at these periods he never rises more than a few degrees above the horizon, he is, as it were, in a state of permanent rising and setting, and seems to exhibit longer and more variously the beautiful appearances produced by that position. At this time the naked eye can view him without being dazzled; and Captain Lyon considers the softened blush-colour that his rays exhibit through frost as possessing a charm which surpasses even that of an Italian sky.

Mock suns.

Appearance of natives.

Notwithstanding all these resources, the monotony of the scene was beginning to be oppressive, when it was relieved by an unexpected incident, which attracted universal attention. On the morning of the 1st February, a number of distant figures were seen moving over the ice, and, when they were viewed through glasses, the cry was raised, "Esquimaux! Esquimaux!" As it was of great importance to deal



CHAP. VII. once, [illegible] in its utmost brilliancy, and exhibiting all the appearances described by these northern observers. His [illegible] agree perfectly with those of Captain Lyon.

Luminous meteors.

[illegible] luminous meteors, arising apparently from the reflection caused by the minute and highly crystallized particles of ice, appear in succession to embellish the [illegible] sky. The sun and moon are often surrounded with halos or concentric circles of vapour, tinted with the [illegible] of the rainbow. Parhelia, or mock suns, frequently accompany these accompaniments, [illegible] of the firmament. [illegible] was seen, Mercury and Saturn in Hudson's Bay, [illegible] six at the same moment. They are most brilliant at daybreak, diminish in lustre as the sun ascends, but again brighten at his setting. The solar orb itself, for some time before it finally departs for the winter, and also after its reappearance in spring, tinges the sky with hues of matchless splendour. The edges of the clouds near that luminary often present a fiery or burnished appearance, while the opposite horizon glows with a deep purple, gradually softening as it [illegible] into a delicate rose-colour of inconceivable [illegible]. As it [illegible] never rises more than [illegible], as it were, in a [illegible] progress [illegible] and seems to [illegible] longer and more variously the beautiful appearances produced by that position. At this time the [illegible] eye can view him without being dazzled; and Captain Lyon considers the softened blush-colour that his rays exhibit through frost as possessing a charm which surpasses even that of an Italian sky.

Moon-dogs.

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Appearance of natives.

ESQUIMAUX BUILDING SNOW HUTS.

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kindly and discreetly with these strangers, the two commanders, attended by a small party, proceeded towards them, walking in files behind each other, that they might cause no alarm. The natives then formed themselves into a line of twenty-one, advanced slowly, and at length making a full stop, saluted the strangers by the usual movement of beating their breasts. They were substantially clothed in rich deer-skins, and appeared a much quieter and more orderly race than their rude countrymen of the Savage Islands. As soon as the seamen produced their precious commodities, knives, nails, and needles, an active traffic was set on foot; and the females, on seeing that much importance was attached to the skins which constituted their clothing, began immediately to strip them off. The captains were alarmed for the consequences in a temperature more than fifty degrees below the freezing point; but were soon consoled by observing that the ladies had another comfortable suit under the furs. The strangers were now cordially invited to enter their habitations, to which they agreed most readily, although there appeared no habitations to enter. However, they were led to a hole in the snow, and instructed to place themselves on their hands and knees, in which position, having crept through a long winding passage, they arrived at a little hall with a dome-shaped roof, whence doors opened into three apartments, each occupied by a separate family. These proved to be five distinct mansions, tenanted by sixty-four men, women, and children. The materials and structure of these abodes were still more singular than their position. Snow, the inseparable accompaniment of the northern tempests, became here a protection against its own cold. It was formed into curved slabs of about two feet long and half a foot thick, put together by a most judicious masonry, so as to present a species of structures resembling cupolas, rising about seven feet above the ground, and from fourteen to sixteen in diameter. The mode of inserting the key-slab, which bound the whole together, would,

Friendly greetings.

Traffic.

Native dwellings.

Snow masonry.

CHAP. VII.

Iceglass.

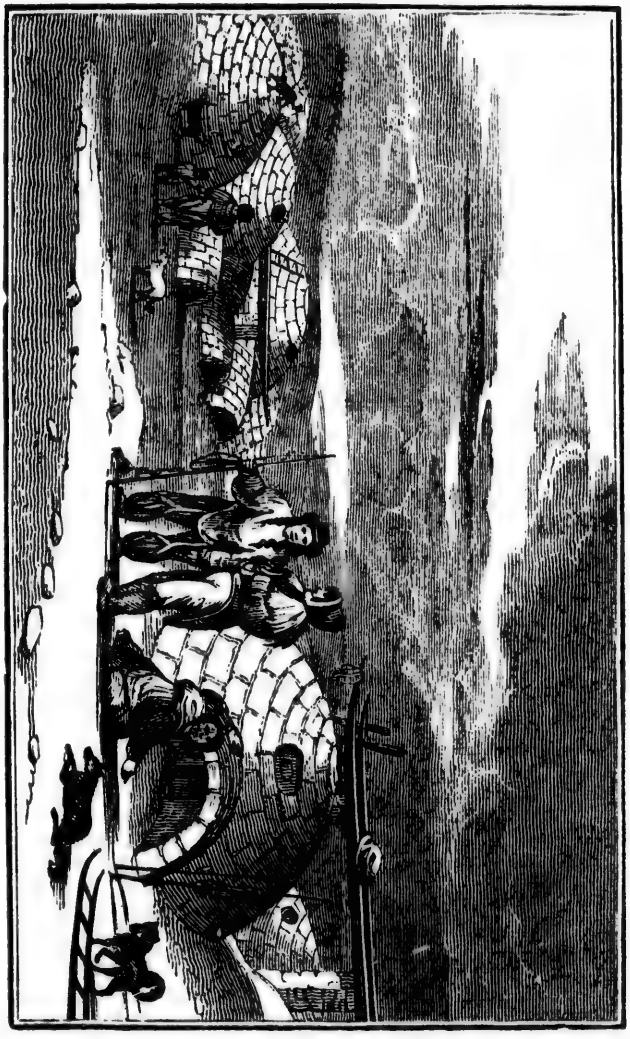
it is said, have been satisfactory to the eye of a regularly bred artist. A plate of ice in the roof served as a window, and admitted the light as if through ground glass; which, when it shone on the interior of the mansions, in their first state of pure transparency, produced soft tints of green and blue. But, alas! ere long, accumulated dirt, smoke, and offal, converted these apartments into a scene of blackness and stench. This little village appeared at first like a cluster of hillocks amid the snow; but successive falls filled up the vacuities, and converted it almost into a smooth surface, so that even boys and dogs were seen walking and sporting over the roofs; though as summer and thaw advanced, a leg sometimes penetrated, and presented itself to the inmates below. Then, too, the ceiling begins to drip; and the tenants, after repeatedly endeavouring to patch it with fresh slabs, and catching, of course, some severe colds, are obliged to betake themselves to a more durable covering. In each room, suspended from the roof, burns a lamp, with a long wick formed of a particular species of moss, fed with the oil of the seal or the walrus, and serving at once for light, heat, and cookery. The family sit round the apartment on a bench formed of snow, strewed with slender twigs, and covered with skins; but this part of the dwelling must be carefully kept a good deal below the freezing-point, since a higher temperature would speedily dissolve the walls of the frail tenement.

Native village.

Lamp.

Invitation to the ship.

After this friendly visit, an invitation was given to the Esquimaux to repair to the ships, when fifty accepted it with alacrity. Partly walking, and partly skipping, they speedily reached the vessels, where a striking congeniality of spirit was soon found to exist between them and the sailors; boisterous fun forming to each the chief source of enjoyment. A fiddle and drum being produced, the natives struck up a dance, or rather a succession of vehement leaps, accompanied with loud shouts and yells. Seeing the Kabloonas, or Whites, as they called our countrymen, engaged in the game of leap-frog, they



Snow-village.

attempted to join; but not duly understanding how to measure their movements, they made such over-leaps as sometimes to pitch on the crown of their heads: however they sprang up quite unconcerned. Their attention was specially attracted to the effects of a winch, by which one sailor drew towards him a party of ten or twelve of their number, though grinning and straining every nerve in resistance; but finding all in vain, they joined in the burst of good-humoured laughter till tears streamed from their eyes. One intelligent old man followed Captain Lyon to the cabin, and viewed with rational surprise various objects which were presented. The performance of a hand-organ and a musical snuff-box struck him with breathless admiration; and on seeing drawings of the Esquimaux in Hudson's Strait, he soon understood them, and pointed out the difference between their dress and appearance and that of his own tribe. On viewing the sketch of a bear, he raised a loud cry, drew up his sleeves, and showed the scars of three deep wounds received in encounters with that terrible animal. The crews were desirous to treat their visiters to such delicacies as the ship afforded, but were for some time at a loss to discover how their palate might be best gratified. Grog, the seaman's choicest luxury, only one old woman could be induced to taste. Sugar, sweetmeats, gingerbread, were accepted merely out of complaisance, and eaten with manifest disgust; but train oil, entrails of animals, and any thing consisting of pure fat or grease, were swallowed in immense quantities, and with symptoms of exquisite delight. This taste was first evinced by an elderly female, who, having sold her oil-pot, took care previously to empty the contents into her stomach, and lick it clean with her tongue, regardless though her face was thereby rendered as black as soot. Captain Lyon being disposed to ingratiate himself with rather a handsome young damsel, presented her with a good moulded candle, six in the pound. She immediately began to eat off the tallow with every appearance of

Leap frog.

Surprise.

Drawing of a bear.

Esquimaux delicacies.

CHAP. VII

the greatest enjoyment, after which she thrust the wick into her mouth; but the captain, concerned for the consequences to this delicate virgin, insisted on pulling it out. In preference to strong liquors they drank water in the most enormous quantities, by gallons at a time, and two quarts at a draught; a supply of liquid which is perhaps necessary to dissolve their gross food, and which, being obtained only from snow artificially melted, is a scarce article in winter.

Water.

Wolves.

The Esquimaux were attended by a large pack of wolves, which seemed to follow them with the view of picking up whatever might be found straggling or defenceless about their habitation. These animals continued through the whole season intensely pressed with hunger, and in eager watch for any victim which might come within their reach. For this purpose they took a station between the huts and the ships, ready to act against either as circumstances might dictate. They did not indeed attack the sailors, even when unarmed, though they were often seen hovering through the gloom in search of food; but every stray dog was seized, and in a few minutes devoured. Two broke into a snow-house close to the vessels, and carried off each a dog larger than himself; but, being closely pursued, one of them was obliged to drop his booty. In the extremity of their hunger, in fact, they hesitated not to devour the cables and canvass. A deadly war was therefore waged against these fierce animals, of which thirteen were killed in the course of the season, and sent to be eaten by the Esquimaux,—a present which was received with much satisfaction.

Dogs seized.

Topographical knowledge.

As spring advanced, the attention of the officers was almost wholly engrossed by the prospects of discovery during the approaching summer. Their neighbours, by no means destitute of intelligence, and accustomed to shift continually from place to place, were found to have acquired a very extensive knowledge of the seas and coasts of this part of America. One female, in particular, named Iligliuk, who bore even among her

countrymen the character of "a wise woman," was, after a little instruction, enabled to convey to the strangers the outlines of her geographical knowledge in the form of a rude map. A pencil being put into her hand, she traced the shore from Repulse Bay with such a degree of accuracy as inspired great confidence in what she might farther delineate. She then began to exhibit a coast reaching far to the north, being, in fact, the eastern limits of Melville Peninsula. Next her pencil took a western direction, when her farther progress was watched with the deepest interest; in the course of which she represented a strait between two opposite lands, that extended westward till it opened on each side, and spread into an ocean apparently unbounded. This sketch, which promised to fulfil their most sanguine hopes, gratified the officers beyond measure, and they loaded Iligliuk with attentions which unluckily soon turned her head, and made her so conceited and disdainful, that they were obliged to discontinue their notice of her.

Esquimaux map.

Captain Lyon, in the middle of March, undertook a journey across a piece of land, lying between the station of the ships and the continent, which had been named Winter Island. The party were scarcely gone when they encountered a heavy gale, bringing with it clouds of drift, and a cold so intense that they could not stop for a moment without having their faces covered with frost-bites. After some vain struggles they determined to pitch their tent; but as the temperature within was at zero, and continually lowering, they felt that they could not live through the night under such shelter. They therefore dug a cave in the earth, and by huddling together round a fire, immersed in smoke, to which no vent was allowed, contrived to keep up some portion of warmth, though still ten or fifteen degrees below the freezing-point. In the morning their sledge was too deeply buried beneath the drift to leave any hope of digging it out, and they could not reach the ships, now six miles distant, except by pro-

Winter Island.

CHAP. VII.

Dangers of the exploring party.

ceeding on foot through a tempest of snow falling so thick that they could not see a yard before them. Finding sometimes no track, sometimes several leading in different directions, they were soon bewildered, and wandered they knew not whither among heavy hummocks of ice. The frost-bites were so numerous that they could not muster hands enough to rub the parts affected, and some began to sink into that dreadful insensibility which is the prelude to death by cold, and to reel about like drunken men. In fact, they had resigned almost every hope of escape, when providentially there appeared a newly beaten track, which they determined to follow, and in ten minutes it led them to the ships. Their arrival there caused indescribable joy, as they had been nearly given up for lost; while no one could be sent in search of them without imminent risk of sharing their fate.

Snow blindness.

On the 8th May, in a more favourable season, Captain Lyon undertook another journey. In a few hours he crossed Winter Island, and reached the strait separating it from the continent, covered with heavy grounded ice very difficult to walk upon. The sun, now powerful, produced such a glare on the snow as affected several of his attendants with severe blindness; while the only means of procuring water was by holding up plates of ice in the solar rays, by which they were gradually melted. The party, having reached the mainland, proceeded a considerable way along the coast, crossing several bays; but at last they came in view of a bold cape, which they fondly hoped was the extreme point of America. Here they were overtaken by a storm of snow, but not accompanied like the other with perilous cold; it melted as it fell, and formed a pulp which penetrated into their tents, yet did not dissolve so completely as to be fit for drinking. This storm kept them imprisoned sixty-eight hours; which dreary interval they enlivened by reading in turn from three books they chanced to have with them, and as soon as the sun began to gleam they hastened to return to the ships.

Snow storm.

The end of May presented a gloomy aspect, the season being still more backward than in the more northerly and rigorous climate of Melville Island. The snow was melted only on some spots, and hardly any symptoms of vegetation were yet visible; but, as there was an extent of open water in the sea without, Captain Parry determined upon sawing his way to it. This was a most laborious process, the ice being much thicker and stronger than at the commencement of the season; and after the men had continued at it more than two weeks, and were within forty-eight hours of completing a canal, the body of the ice made a movement which closed it entirely up. As they were looking on in despair at this disaster, another passage opened, which they attempted to render available; but it, too, was closed in the same manner. Yet these agitations had at last the effect of causing the whole mass to float out into the open sea, and thus leaving to them an unobstructed outlet.

Aspect in May.

On the 2d July they resumed their voyage of discovery. They had a favourable run through this entrance, which formed a continuation of Fox's Channel; but a strong current from the north was still bringing down the ice with great force. The Hecla underwent some severe pressures, and, within five or six hundred yards of the Fury, two large floes dashed against each other with such a tremendous concussion that numberless huge masses were thrown fifty or sixty feet into the air. The vessel, had she come for a second within the sphere of these movements, must have been crushed to pieces,—happily she escaped. This current, however, was highly promising, since it could not be traced to the mouth of Hudson's Strait, and must therefore, they concluded, have come from the Western Ocean, which they were so anxious to reach.

Voyage resumed.

Escape of the Fury.

The ice passed by, and the ships proceeded with a favouring wind and tide. The shores began now to put on their summer aspect; the snow had nearly disappeared; and the ground was covered with the richest

Summer.

CHAP. VII.

bloom of Arctic vegetation. The navigators came to a fine river named Barrow, which formed a most picturesque fall down rocks richly fringed with very brilliant plants. Here the rein-deer sporting, the eider-duck, the golden-plover, and the snow-bunting, spreading their wings, produced a gay and delightful scene. On the 14th they reached the island of Amitioke, which had been described as situated near the strait they were then endeavouring to attain. They saw about two hundred walruses lying piled, as usual, over each other on the loose drift-ice. A boat's crew from each ship proceeded to the attack; but these gallant amphibia, some with their cubs mounted on their backs, made the most desperate resistance, and one of them tore the planks of a boat in two or three places. Three only were killed, the flesh of which was found tolerable, affording a variety amid the ordinary sea-diet.

Barrow River.

Walruses.

The discoverers now proceeded northwards, and saw before them a bold and high range of coast, apparently separated from that along which they were sailing. This feature, agreeing with the indications of Iligliuk, flattered them that they were approaching the strait exhibited by her as forming the entrance into the Polar Basin. They pushed on full of hope and animation, and were farther cheered by reaching the small island of Igloolik, which she had described as situated at the very commencement of the passage. Accordingly, they soon saw the strait stretching westward before them in long perspective; but, alas! they discovered at the same moment an unbroken sheet of ice from shore to shore, crossing and blocking up the passage; and this not a loose accidental floe, but the field of the preceding winter, on which the midsummer sun had not produced the slightest change. Unable to advance a single step, they amused themselves with land-excursions in different directions; and Captain Parry at length determined, on the 14th August, with a party of six, to undertake an expedition along the frozen surface of the strait. The journey was very laborious, the ice being sometimes thrown up in rugged hummocks,

Coast discovered.

Impediment of ice

and occasionally leaving large spaces of open water, which it was necessary to cross on a plank, or on pieces of ice, instead of boats. In four days they came in view of a peninsula terminated by a bold cape, the approach to which was guarded by successive ranges of strata, resembling the tiers or galleries of a commanding fortification. The party, however, scrambled to the summit, whence they enjoyed a most gratifying spectacle. They were at the narrowest part of the strait, here about two miles across, with a tide or current running through it at the rate of two miles an hour. Westward the shores on each side receded till, for three points of the compass and amid a clear horizon, no land was visible. The captain doubted not that from this position he beheld the Polar Sea; into which, notwithstanding the formidable barriers of ice which intervened, he cherished the most sanguine hopes of forcing his way. He named this the Strait of the Fury and Hecla, and gave the sailors an extra can of grog, to drink a safe and speedy passage through its channel.

Overland expedition.

Polar Sea.

He now lost no time in returning to the ships, where his arrival was very seasonable; for the opposing barrier, which had been gradually softening and breaking into various rents and fissures, at once almost entirely disappeared, and the vessels next morning were in open water. On the 21st they got under weigh; and, though retarded by fogs and other obstructions, had arrived on the 26th at that central and narrowest channel which the commander had formerly reached. A brisk breeze now sprang up, the sky cleared, they dashed across a current of three or four knots an hour, and sanguinely hoped for an entire success, which would compensate so many delays and disappointments. Suddenly it was announced from the crow's nest, that ice, in a continuous field, unmoved from its winter station, occupied the whole breadth of the channel. In an hour they reached this barrier, which they found soft, porous, and what is termed rotten. Spreading all their canvass, they bore down upon it, and actually forced their way through a

Disappearance of the ice barrier.

CHAP. VII.

Voyage interrupted.

space of three or four hundred yards; but there they stuck, and found their progress arrested by an impenetrable mass. From this point, during the whole season, the ships were unable to advance a single yard; nor had the crews any means of exerting their activity except in land-journeys. Captain Lyon undertook an expedition southward, to ascertain if any inlet or passage from sea to sea, in this direction, had escaped notice. The country, however, was so filled with rugged and rocky hills, some a thousand feet high, and with chains of lakes in which much ice was floating, that he could not proceed above seven miles. Though it was the beginning of September, the season was only that of early spring; and the buds of the poppy and saxifrage were just unfolding, to be prematurely nipped by the fast-approaching winter.

Western land expedition.

More satisfactory information was derived from another excursion made by Messrs Reid and Bushman, who penetrated sixty miles westward along the southern coast of Cockburn Island, till they reached a pinnacle, whence they saw, beyond all doubt, the Polar Ocean spreading its vast expanse before them; but tremendous barriers of ice filled the strait, and precluded all approach towards that great and desired object.

Speedy return of winter.

It was now the middle of September, and the usual symptoms, of deer trooping in herds southward, floating pieces of ice consolidating into masses, and the thin pancake-crust forming on the surface of the waters, reminded the mariners, not only that they could hope for no farther removal of the obstacles which arrested their progress, but that they must lose no time in providing winter-quarters. The middle of the strait, at the spot where they had been first stopped, occurred as the station whence they would be most likely to push future discovery; but prudence suggested a doubt, whether the ships, enclosed in this icy prison with such strong barriers on each side, might ever be able to effect their extrication. The chance of being shut up here for eleven months amid the privations of an Arctic winter,

appeared, at all events, a serious consideration. By returning to Igloolik, they would be ready to catch the earliest opening, which was expected to take place on the eastern side, from whence a few days would bring them back to their present station.

Return to Igloolik.

On the 30th October, by the usual operation of sawing, the ships were established in a harbour at Igloolik. The ensuing season was passed with the most careful attention to the health and comfort of the crews; but though their spirits did not sink, there appears to have been, on the whole, less of gayety and lightness of heart than in the two former years. We hear nothing of the drama or even of the school. In this position, north of Winter Island, they were deprived for about seven weeks of the sun's cheering beams. On the 2d December refraction still showed, from the deck of the Fury, about the sixteenth part of his disk. At the new year *Arcturus* and *Capella*, stars of the first magnitude, were visible half an hour before and after midday. On the 5th January 1823, the horizon was so brightly suffused with red that they hoped erelong to see the sun's orb burst forth; but a fortnight of thick fog occasioned a disappointment. On the 19th, the sky having cleared, they saw him rise attended by two parhelia, and both crews turned out to enjoy the novelty and splendour of this cheering spectacle.

Spirit of the crews.

Stars at mid day.

The sailors found at Igloolik a colony of Esquimaux, who received them at first with surprise and some degree of alarm; but on learning they were from Winter Island, and intimate with its tenants of last season, they welcomed them as familiar acquaintances. These natives belonged to the same tribe, and were connected by alliance and close relationship with many individuals of the party now referred to; of whom, therefore, they were delighted to receive tidings. The crews spent the winter with them on a friendly footing, and rendered important services to many individuals during a period of severe sickness. This intercourse, however, was not on the whole nearly so satisfactory as in the former place

Colony of Esquimaux.

CHAP. VII

Native ingratitude.

and season. It began to be observed that their attachment to the Kabloonas was greatly prompted by interest and by the hope of extracting presents; that they begged for food and gifts almost without intermission, and yet showed no gratitude on receiving them; and that they took much less into consideration what they themselves got than what others got more than they. The indifference shown towards such of their own tribe as were in a debilitated and suffering state was viewed also with much dissatisfaction. Kagha, a widow, cursed certainly with a most frightful temper, was found almost perishing through neglect. Captain Lyon took her into his own cabin, where, however, her filth and scolding made her a perfect nuisance; so that, after being recruited and clothed in two folds of deer-skin, she was remanded to the huts. Ten days having elapsed, she was found at the point of death, solely, as it appeared, from want of food; and, though removed immediately to the ship's hospital, she died on the morrow. Our people were also much displeased at the stoical firmness with which the relations received notice of two of their deceased kindred, whom the dogs had dug up from under the snow, that formed their only covering, and then devoured. It was indeed very difficult to find an earthy grave beneath the glebe, now frozen as hard as rock; but an Esquimaux acquaintance having lost his wife, the sailors piled over her such a heap of stones as might defy the attempts of all the animals wild and tame, which prowl throughout this dreary region. The man gave thanks, but not cordially; he even expressed a dread lest the pressure of this huge pile would be painfully felt by his deceased spouse; and soon after, when an infant died, he declared her wholly incapable of bearing such a burden, and would allow nothing but snow to be laid over her.

Kagha a native female.

Ideas of sepulture.

Observation of the natives.

This people, during the expedition, became the subjects of a more minute observation than had ever before been made upon them by Europeans. They constitute a very widely-diffused race, occupying all the shores of the

Northern Ocean, and embracing nearly the entire circuit of the globe. Richardson and Franklin found them along the whole coast of the American Polar Sea, and Kotzebue in the channel near Behring's Straits. The Samoiedes and Kamtschadales, in Northern Asia, seem to belong to the same family. A similarity of visage and figure, boats, huts, and instruments,—even a resemblance in habits, character, and mode of life,—might have been produced by the common pressure of the same peculiar circumstances. The affinity of speech, however, which is such as proves the dialects of all the Esquimaux to be mere varieties of one common language, affords a clear proof that an original race from some one quarter has spread over the whole range of those immense and desolate shores. This migration must have been facilitated by the vast continuity of coast which stretches along the Arctic Ocean, and is not equalled in any other quarter. Hence, probably, these tribes, at distant ages, connected the old and the new continents, which otherwise were then wholly unknown to each other.

Their distribution.

Dialects of language.

Their external form seems influenced, and as it were characterized, by the severity of the climate. Their stature is decidedly lower than that of the European; five feet nine inches being considered even in a man as almost gigantic; and though the trunk of the body is somewhat thick, all the extremities are small, especially the hands and feet, and the fingers short. The face is broad and flat, the nose small, and at the same time sunk so deep, that in some instances a ruler could be applied from cheek to cheek without touching it. It is somewhere observed that their visage presents that peculiar form which the human face naturally assumes under exposure to intense cold, when all the projecting features are drawn in and the cheeks consequently pushed out. In the same way the action of the weather may perhaps produce the high cheekbones of mountaineers. Under these modifications, however, both their body and limbs are very tolerably shaped. Even the female countenance, though without pretensions to regular beauty,

Influence of climate on the human form.

Group of Esquimaux.

Female countenance.

is often agreeable, having a frank and good-humoured expression; and, were it cleared of the thick crust of grease and dirt, so as to exhibit the real complexion, which is only that of a deep brunette, it might, even in Europe, be reckoned handsome. The skin is unctuous and unpleasantly cold to the touch; the flesh soft and flabby; owing probably to the fat animal substances which form the principal part of their food.

Dress.

Dress, through the necessity imposed by the climate, is much more ample, and prepared with greater care than is usual among other savage tribes. That of the

men chiefly consists in a double coat of deer-skin; the inner part of which, having the hair placed next the body, serves as a shirt, while from the outer a spacious hood is raised to cover the head. The breeches of the same material, and also double, reach down, overlapping the boots, which extend to the knee, and are composed either of deer-skin, or, if intended for hunting and travelling, of the hide of the seal or walrus. The dress of the females comprehends the same articles, with only some variations in form. They considered themselves particularly fortunate in wearing breeches, and could not hear without pity of their sisters in Europe, whom the caprice of fashion had deprived of so comfortable an habiliment. Their chief distinction lay in their boots, framed of such capacious dimensions as to make each leg appear as thick as the body, and allow them to move only with a waddling gait, similar to that of Muscovy ducks. These boots, however, form most spacious receptacles for whatever goods, lawful or unlawful, may come into the possession of the wearer. Captain Parry suspects that this huge buskin was originally constructed as a receptacle for their children,—a use still made of it among some tribes,—and thus retains its old form, though the hood is now generally substituted for this domestic purpose.

Male dress.

Female dress.

The Esquimaux do not huddle on these garments in a rude and careless manner, as a mere protection against the fierce influence of the climate; they display, like other savages, a passion for embellishment and finery. Their clothes are neatly sewed with threads made from the sinews of animals; the effect of their rich furs is heightened by being arranged in stripes of various colours, and by fringes along the border, adjusted often with considerable taste. They sought anxiously for beads, in lieu of which they had ornamented themselves with girdles composed of the teeth of the fox, wolf, or musk-ox, and one female had fringed her jacket with a long row of fox's noses. It was suspected that these decorations might be regarded in some degree under the

Carefulness in dressing.

Fondness for ornament.

CHAP. VII.

character of amulets or charms. Nor do they omit that universal ornament of savages, the painting of the skin, —a process which is executed, not by the Indian method of puncturing, but by a particular species of sewing. The women draw under the epidermis a needle, with a thread dipt in lamp-black and oil, which being taken out, and pressure applied to the part, leaves behind it a permanent olive tint. This operation, when performed with complete success, does not draw blood; but it is seldom carried to that degree of perfection. The face, arms, thighs, and sometimes the breasts of the females, are profusely covered with this rude figuring.

Painting the skin

Labour of providing subsistence.

The labour necessary for subsistence under this rigorous climate is more arduous, and occupies a greater share of time, than among any other race, either civilized or savage. The ground, frozen for more than nine months of the year, yields neither root nor herb which can form a standard article of food. No tame animals are reared for this purpose; the dogs being so applied only in the last extremity. Their main resource is the chase of the wild animals which inhabit the sea and the shore. They lead, accordingly, a life of contrivance and adventure, in the course of which energy and hardihood of character are formed, and many faculties amply developed. In the absence or extreme scarcity of wood and iron, they use bones, which they have of all shapes and sizes; yet these are often found too inflexible a material; while their cord or line is formed by cutting the toughest and most elastic skins into long stripes. During the short summer, they pursue with bow and arrow the deer, whose flesh as meat and whose hide as clothing are esteemed above all others. The eider and other ducks also furnish them with food; while the skin, with the feathers inwards, supplies a light and comfortable dress. The early winter, however, compels these animals, in large bands, to move into more genial climes; and hence, for nine months in the year, subsistence must be found in the waters. These indeed are filled with the large cetaceous animals, the seal, the walrus, and

Contrivance and adventure.

Esquimaux watching a Seal-hole.

oven the whale; but the hunters and the game are separated by a thick covering of ice. These creatures, however, though they make their chief dwelling beneath the waves, as formerly observed, experience the necessity of ascending from time to time for the purpose of respiration. The Esquimaux watch with the most indefatigable patience for their appearance, often erecting a little snow-shed to protect them from the cold, and the instant any one of them is visible, strike into him a dart or harpoon, of which they have several forms and sizes, and sometimes throw it by means of a long line,—a necessary part of their apparatus. Their grandest achievement, however, consists in the attack of the whale himself; on which occasion a large body of them assemble, armed with a variety of weapons. When struck he instantly plunges into the water; but, being obliged to come up at short intervals, is always assailed afresh, till, overcome by fatigue and loss of blood, this mighty monarch of the deep remains an unresisting prey. An Esquimaux does not hesitate, even singly, to attack the Polar bear, the fiercest and most terrible of all the Arctic races. In this encounter, however, he must be aided by a band of his trusty dogs, which rush

Hunting.

Attacking the whale.

Polar bear.

CHAP. VII.

Tactics of the hunter.

fearlessly on, keep the animal at bay, and threaten him on all sides; while the master advances with his spear, and avoiding, with almost preternatural agility, the furious springs of the enraged monster, pierces him with repeated strokes. Nooses, springes, and traps, are also used with skill, chiefly against birds and foxes.

Wastefulness.

But they show little prudence in the management of their supplies. The instant that tidings transpire of the capture of a walrus, shouts of exultation are raised through the village, whose inhabitants share the prize in common. On its arrival, slices are instantly cut out, every lamp is supplied with oil, the houses are in a blaze; all the pots are filled with flesh, and the women, while cooking, pick out and devour the most dainty morsels.

Native feast.

The feast prepared, one man takes up a large piece, applies it to his mouth, and severs with his teeth as much as that cavity can possibly admit; then hands it to his neighbour, and he to the next, till all is consumed. A new piece is then supplied, and thus the process continues, almost without intermission, till the animal is entirely devoured. To the capacity of an Esquimaux stomach there seems scarcely any limit. Some experiments on the subject made in the Fury, and carefully noted, produced the most surprising results. A youth named Toolooak stands recorded, as having in twenty-one hours received into his stomach ten pounds four ounces of solid food, a gallon and a pint of water, with more than a pint of soup. Captain Lyon pitched against him Kangara, who in nineteen hours finished nine pounds fifteen ounces of solid, and a gallon and a half of fluid. At this rate the most ample store very speedily disappears; one day they are labouring under fever, hemorrhage, and all the maladies incident to repletion; a few days after they are without a morsel to eat.

Improvidence.

Considered as to their intellectual condition, this people have not the least tincture of what goes by the name of learning; can form no abstract idea; nor count above ten, the number of their fingers. Yet, amid a life somewhat varied and eventful, many faculties,

Development of faculties.

without any artificial culture, are spontaneously developed. We have seen the skill displayed in the construction of their houses, as well as in pursuing and killing the various tenants of the earth and of the waters, on which their subsistence depends. Their migratory habits give them a considerable extent of local and geographical knowledge, which they are even in a certain degree able to systematize and delineate. They are also shrewd and intelligent in all the affairs of common life, and possess a considerable talent for humour and mimicry.

Moral qualities.

In their moral qualities, the Esquimaux, or at least this particular tribe, present much that is worthy of commendation. At the first opening of the intercourse, the most undeviating integrity marked all their conduct, —though this quality, in the course of two winters' communication, was considerably undermined. They were exposed indeed to most severe trials of virtue, by seeing constantly scattered about the ships little planks, pieces of iron, and empty tin pots,—a temptation to them not less formidable than if the decks had been strewed with gold and jewels. It also came to their knowledge that, in some of their early exchanges, rich skins had been bartered for beads and other trifles of no real value,—a system against which they exclaimed as absolute robbery. From first to last honesty was practised among themselves in a manner worthy of the golden age. Their dresses, sledges, and all their implements of hunting and fishing, were left exposed inside or outside of the huts, without any instance being known of their having been carried off. Property, without the aid of laws and tribunals, was in the most perfect security. The common right to the products of the chase marks also a singular union, without seeming to relax their diligence in search of food, though it may perhaps contribute to their very thoughtless consumption of it. The navigators admit that they were received with the most cordial hospitality into the little huts, where the

Honesty.

CHAP. VII.

Hospitality.

best meat was set before them, and the women vied with each other in the attentions of cooking, drying, and mending their clothes. "The women working and singing, their husbands quietly mending their lines, the children playing before the door, and the pot boiling over the blaze of a cheerful lamp," gave a pleasing picture of savage life. Yet a continued intercourse with them showed that they inherit their full share of human frailty. Begging we shall pass over, though in many instances persevering and importunate, because it seems to have been called forth almost entirely by their connexion with our countrymen, and by too lavish presents at the first; while their little bursts of envy appear to have flowed from the same source.

Native vices.

But the fair sex are charged with a strong propensity to slander and detraction, which were as busy among them as they sat in circles round the door mending their lines as in the most fashionable drawing-rooms. Their own conduct, meantime, is said to have afforded the most ample scope for censure, especially in regard to connubial fidelity; yet, when it is admitted that these faults were carefully concealed and much outward decorum observed, and that the propensity to calumny often led the natives beyond the strict limits of truth, we doubt whether too implicit reliance may not have been placed on the scandalous chronicle of the frozen regions.

Apathy to suffering.

The natives certainly do appear to display a peculiar apathy in regard to the sufferings and even the death of neighbours and relations. Widows, and the aged and infirm, if they have not children of their own, experience the greatest indifference. In times of plenty, indeed, they share in the general abundance of food, but during scarcity a very small quantity reaches them; and, receiving no attendance in their sickness, they often perish through want and neglect. The children are treated with extreme tenderness; though the practice of adoption, which prevails most extensively, and establishes in full force between the parties the ties of father and child,

is practised with regard to boys only, and seemingly in order that they may contribute to support the old age of their factitious parents.

Religious ideas.

The religious ideas of the Esquimaux, though they cannot be dignified with any better name than superstition, are not much more absurd than the popular creed of the ancient Greeks and Romans. Their principal deity is Aywillaiyoo, a female immensely tall, with only the left eye, wearing a pigtail reaching to her knee, so thick that it can scarcely be grasped by both hands. Captain Lyon witnessed a mighty incantation, in which Toolemak, the chief magician, summoned Aywillaiyoo to the upper world to utter her oracles. The party were assembled in a hut, where light after light was put out, till they were left in total darkness. The wizard then, after loud invocations, professed to descend to the world below to bring up the goddess. Soon there arose a low chant of peculiar sound, imagined to be the voice of Aywillaiyoo. During half an hour, in reply to the loud screams and questions of her votaries, she uttered dubious and mystical responses; after which the sound died away, and she was supposed to descend beneath the earth, when Toolemak, with a shout, announced his own return to the upper world. The performer, however, being soon after on board a British ship, was treated with nine glasses of hot water (brandy), under the influence of which he began to act over again his enchantments; when it appeared that, by varying modes of applying the hand or jacket to the mouth, he produced those changeful and mysterious sounds which had passed for the words of the goddess. This divinity has for her father a giant with one arm.

Native wizard.

Esquimaux deities.

The Esquimaux pantheon comprises, moreover, Pamiooli, a spirit frequently invoked, and a large bear, whose dwelling is in the middle of the ice, and who frequently holds converse with mankind. The natives believe also in a future world, the employments and pleasures of which, according to the usual creed of savage races, are all sensual. The soul descends beneath the earth into

CHAP. VII

Belief in a future state.

various abodes, the first of which partakes somewhat of the nature of purgatory; but the good spirits passing through it find the other mansions improve, till at a great depth they reach that of perfect bliss, where the sun never sets, and where, by the side of large lakes that never freeze, the deer roam in vast herds, and the seal and walrus always abound in the waters.

Unfavourable spring.

We now return to the progress of the expedition. The spring was singularly unfavourable. Captain Lyon attempted to penetrate across Melville Peninsula, but found the route so rugged and so barred by steep chains of mountains, that he was obliged to return in nineteen days without any discovery, except of two rapid rivers falling into the sea near Igloolik. Lieutenant Hoppner accompanied a party of Esquimaux to Cockburn Island, but could not make his way to any distance inland. It was the 7th of August before they were able, by severe sawing, to reach the open sea; by which time Captain Parry had renounced the hope of effecting any thing important during the short remnant of this season. He formed, however, a very bold plan; which was to bring all the stores of the other vessel on board the Fury, and with it alone to brave a third winter in the Polar regions, hoping that the succeeding summer might be more propitious. But, as he was preparing to carry this too daring project into effect, a report was made that symptoms of scurvy had broken out on several of the crew, whose physical strength appeared to be generally impaired by the two hard winters through which they had passed. This left no choice; and, in compliance with the general opinion of his officers, he forthwith began his voyage homewards. The ships were drifted about in a stormy sea covered with ice for twenty-four days; but, being at last favoured with a westerly breeze, they crossed the Atlantic, and on the 10th of October 1823 arrived in Brassa Sound, Shetland. After two successive years thus passed in the depths of the frozen world, whence not the faintest rumour of their existence had reached Britain, the officers and men were viewed

Appearance of scurvy.

almost as persons risen from the dead. The bells of Lerwick were rung, and other extraordinary demonstrations of joy made on their arrival. In a few days they entered the Thames. CHAP. VII Return.

Two attempts had thus been made, each to a certain point successful, but both arrested much short of the completion of the grand enterprise. The government at home, however, were not willing to stop short in their spirited career. The western extremity of Melville Island, and the Strait of the Fury and Hecla, appeared to be both so blocked up as to afford little hope; but Prince Regent's Inlet seemed more likely to lead to a prosperous issue. When explored during the recent voyage, it had indeed presented an icy barrier, but such as so often gave way suddenly and almost instantaneously, that the obstacles opposed by it early in the season could not be considered very alarming. A passage through this channel would bring the ships to the great sea bounding the northern coast of America, that had been seen from the strait mentioned above, and by which there was the fairest prospect of reaching, by the most direct route, the waters of the great Pacific. To follow up these views, Captain Parry was again fitted out in the Hecla; while, in the accidental absence of Captain Lyon, the Fury was intrusted to Lieutenant, now Captain Hoppner, who had taken an active part in the operations of the preceding voyage. Undaunted enterprise.

The expedition set sail from Northfleet on the 19th May 1824, and was in Davis' Strait by the middle of June. As the season, however, chanced to be peculiarly rigorous, it was not till the 10th September that, after repeated repulses and severe straining, they caught a view of the bold and magnificent shores of Lancaster Sound, in which a few solitary icebergs were floating. After this they thought themselves fortunate, when, by pushing their way through many miles of newly formed ice, they reached Port Bowen, in time to make it their winter-quarters. New expedition.

The provision made for the physical well-being of

CHAP. VII.

Provisions for the expedition.

the expedition during the cold season was still more complete than in the former voyages. The heat of the cabins was kept up to between 50 and 60 degrees, and the seamen wore next the skin a clothing of fur,—a substance which nature has endowed with a warmth far surpassing that of any human fabric. Yet the deep monotony produced by the uniform aspect of external nature, instead of becoming less sensible by habit, was only the more painfully felt. As the Arctic theatre had lost its attraction, Captain Hoppner started the idea of masquerades, which were, perhaps, still more out of keeping with the place and persons; but the sailors caught at it with pleasure, and on these occasions all of them acted their part with great spirit, and with the strictest decorum. The salutary and steady influence of the schools was again revived, and the whole crew gave their presence, either as teachers, scholars, or spectators.

Favourable spring.

The spring was unusually favourable, and, with comparatively easy sawing of the ice, the navigators warped out to sea on the 19th July 1825. As it appeared most desirable to coast southward along the western shore of the inlet, they stood across the bay, but were soon arrested by a continuous barrier of ice, which, however, left an open space on the opposite side. A fruitless attempt was now made to penetrate southward, the channel being found completely impeded; hence it was judged advisable, with the view of seeking a less-encumbered passage, to stretch to the northward. An adverse gale, by which they were overtaken near the mouth of the inlet, now drove them eastward; but at last they regained their course, and soon came in view of the bold face of the Leopold Isles, the rocks of which rise in horizontal strata of limestone to the height of 600 or 700 feet, resembling a huge and impregnable fortress.

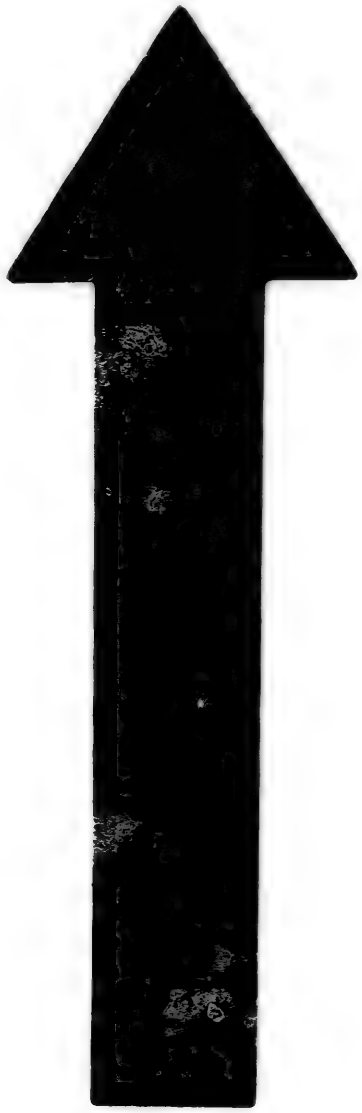
Cape Seppings.

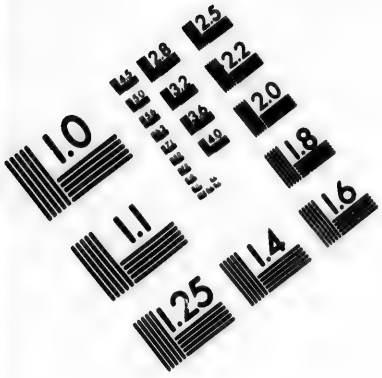
Having touched at Cape Seppings, Captain Parry proceeded down the inlet, where he was no longer arrested by the unbroken barrier. The sea, however,

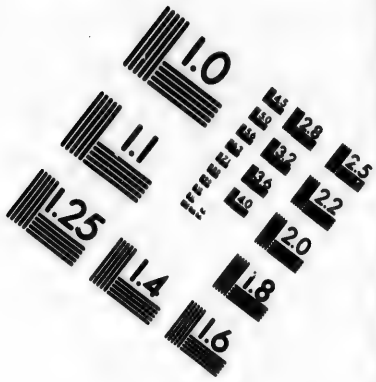
Pressure of ice.

was still heavily encumbered by numerous small fragments, that were tossing about in every direction, and pressed upon the ships so hard that the men wished for a contrary wind; which, coming from the south, would open and disperse the masses collected and driven against them by the north wind. In this anxious and precarious state they worked slowly on till the 1st August, when they reached the latitude of 72° 42′, longitude 91° 50′. Here the Fury received a most severe shock by a large floe, which forced her against the grounded ice of the shore; and tidings soon came to the Hecla that she had been very sharply *nipped*, and was admitting water copiously. The commander trusted that this would prove as harmless as the many shocks which this vessel had already endured; that the water made its entry by means of the twisted position into which she had been thrown; and that, when she was relieved from pressure, her leaks would close. But the next accounts were, that she could not be kept clear of water except by the action of four pumps, at which the whole crew, officers and men, were obliged to work. It became evident, that the evils under which she laboured could only be discovered and remedied by the operation of *heaving down*, by which her position being reversed, the parts now under water would be exposed to view. This expedient required a harbour, and there was none at hand; however, something was formed which resembled one, by connecting with anchors and bower-cables the grounded ice to the shore. Four days were then spent in unlading the Fury of those ample stores with which she had been provided. The operation was interrupted, too, by a violent storm of snow; while the external ice being driven in, demolished, in a great measure, the slender bulwarks by which the vessel was secured. Her holds were filled with water, and a minuter examination proved the damage of her hull to be still more serious than was at first apprehended. No means nor prospect appeared, either of saving her in her present situation, or of floating her to any known place of

Injury of the Fury.







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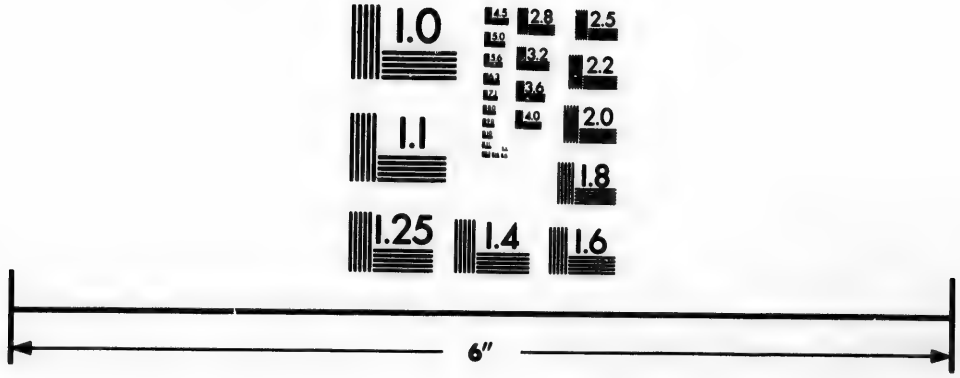

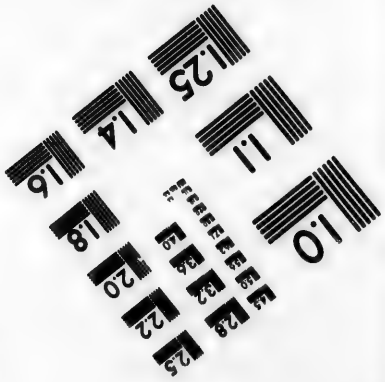

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CHAP. VII.

Fury abandoned.

safety. In these circumstances, Captain Parry, without expressing any opinion of his own, called for a report from Captain Hoppner and his principal officers, all of whom agreed "that an absolute necessity existed for abandoning the Fury." Signals, therefore, were immediately made to the officers and men to carry their clothes and effects on board the Hecla. The stores, owing to want of room, were necessarily sacrificed along with the ship; and barrels of beef, beer, biscuit, and other valuable articles of provision, were left exposed on those savage and desolate shores, where they were then supposed unlikely to afford aid or benefit to any human being. After such a disaster, and the end of August having arrived, there was just time enough left to bring the Hecla home with a fair prospect of safety,—an object which was in due time accomplished.

CHAPTER VIII.

Ross's Second Voyage.

Motives which led to the Expedition—Difficulties in equipping it—Expense defrayed by Sir Felix Booth—Accidents on the Coast of Scotland—Passage across the Ocean—Refitted at Holsteinborg—Passage through Barrow's Strait and down Regent's Inlet—Discovery of the Fury's Stores—Difficult Navigation—Winter Station in Felix Harbour—Means devised for resisting the Cold—Visit from a Party of Esquimaux—Information respecting the neighbouring Coasts—Expedition to Nei-tyel-le—To Shagavoke—To the Northward—For Cape Turnagain—Obliged to stop at Victory Point—Return—Attempt to sail next Summer—Arrested for the Winter—Excursion to the Northward—And across the Country—Commander Ross's Discovery of the Magnetic Pole—Another fruitless Attempt to bring home the Victory—Determination to abandon her—Summary of Observations on the Esquimaux—Journey along the Coast to Fury Beach—Fruitless Attempt to cross Barrow's Strait—Winter at Somerset House—Successful Navigation next Summer—Reach the Isabella of Hull—Reception—Return—Joy at their Arrival—Rewards to the Adventurers—General Results of the Voyage—Return of Captain Back.

CHAP. VIII.

Perseverance wearied out.

So long a series of efforts, fruitless as to the ultimate object, and without the prospect of any decisive result, not only wearied out the perseverance of the British government, but combined with the severe spirit of economy, which began to pervade its councils, in inducing a determination not to send any more ships in quest of a north-west passage. Under this chilling influence, even the Board of Longitude was abolished,

CHAP. VIII

National enthusiasm

and likewise the reward of £20,000 offered by Parliament for the discovery which it was meant to promote. This somewhat premature removal of public patronage was however, in a great degree, compensated by the enthusiasm which had arisen in the nation itself. The bold enterprise of one individual, and the splendid munificence of another, led, after no long interval, to the equipment of an expedition, which, in point of interest, has equalled any that ever adventured into the Arctic seas.

Zeal of Captain Ross.

Captain Ross was ambitious of resuming the undertaking which, in 1818, he had pursued with partial success; and it appeared to him that the invention of steam-sailing might be applied with benefit to this peculiar field of discovery. Vessels thus propelled could take advantage of all those openings in the sea, which are so often rendered innavigable from adverse gales; while the power of directing them, in opposition even to wind and tide, might be made available in avoiding a collision with formidable masses of ice. In soliciting, however, from different quarters, the means of fitting out a ship on this principle, repeated disappointments were experienced. Government declined the proposal on the grounds already stated. A merchant, whom Captain Ross endeavoured to tempt by the premium of £20,000, viewed it, not without reason, as a very precarious speculation. Mr (now Sir Felix) Booth,

Sir Felix Booth.

felt, on the contrary, so nice a sense of honour, that he would not embark in the enterprise so long as there could appear a possibility of his being swayed by any sordid motive. But when the parliamentary offer of £20,000 was withdrawn, the scruples of this high-minded individual were removed, and he generously engaged to furnish from his ample fortune the whole of what might be necessary for this grand adventure.

Victory steam-vessel.

Captain Ross purchased the Victory steam-vessel, of 85 tons, which had for some time been employed between Liverpool and the Isle of Man. Additions were made which extended her to 150 tons; and two

London artisans produced an engine on a new plan, which unfortunately, however, did not answer expectation. Provisions were laid in for a thousand days. The Admiralty, though they withheld all pecuniary aid, afforded the use of books and instruments, and even a decked vessel of sixteen tons that had been employed in the Polar expedition; also two boats formerly used by Captain Franklin. So great an interest was excited, that officers high in the navy tendered their services, and even offered to bear a share in the expense; but Captain Ross had already chosen for his second in command his nephew, who had been employed in every one of the recent northern voyages. The ship's company were twenty-two in numb.., including a purser, surgeon, and three mates.

New steam-engine.

On the 23d May 1829, the vessel, after being visited by the Lords of the Admiralty, by the present King of the French, and other eminent characters, was moved down the river. The steam-engine was soon found to be most miserably imperfect. At the utmost, it did not propel the vessel more than three miles an hour; and its action often required to be suspended altogether, in order to stop leaks and make necessary repairs. On the 7th June, however, they had reached the Mull of Galloway, when a dreadful accident occurred. William Hardy, the principal stoker, having lost his footing, one of his arms was entangled in the machinery, and so dreadfully shattered, that the captain, in the absence of the surgeon, who had not yet joined, was obliged to perform an immediate amputation, and treat it as he best could. The poor man was afterwards landed, conveyed to Stranraer, and placed under the care of a regular practitioner.

Impediments to the voyage.

Dreadful accident.

In hopes of remunerating Sir Felix Booth for his large outlay, the John of Greenock had been purchased, and fifty-four seamen engaged, with the view of carrying on the whale-fishery, and perhaps bringing back part of the Fury's stores. This crew joined at Port Logan, on the Scottish coast; but they proposed the

Plan for return of outlay.

CHAP. VIII

unreasonable condition that, whatever the fortune of the fishery might be, they should be paid the same amount as if they came home with a full ship. As they persisted in this extravagant demand, and otherwise behaved in a manner extremely mutinous, it was judged necessary to relinquish this part of the plan altogether. The seamen of the Victory, who, in this crisis, conducted themselves admirably, were recompensed for the loss of their shares by an agreement to give them full pay according to their rating.

Plan defeated.

Tempest

On the 13th June, Captain Ross steered his course through the North Channel, the wind being at first tolerably fair; but on the 14th, after passing the island of Rathlin, the vessel was assailed by so dreadful a tempest, that the top of the foremast gave way with a terrible crash, and only a few splinters kept it from falling into the sea. In crossing the ocean, they had a fair wind, and sailed without aid from steam. On the 1st July they descried, though at the distance of thirty-one leagues, a point of land, which they concluded to be Cape Farewell. On the 3d, they were off that southern extremity of Greenland, having already had served out to them their Arctic dresses. They now enjoyed so favourable a gale, that on the 6th and 7th they ran 278 miles, and reached the latitude of 61° 33′, where several large pieces of drift-wood were picked up, which proved extremely useful. On the 15th, they crossed the track pursued by the Isabella in 1818, and next day were in latitude 65° 34′. The wind becoming moderate and less favourable, they endeavoured to bring the engine into play; but it was so defective as to afford only very limited aid; besides that leaks and other damages were continually occurring, which were not repaired without much labour and difficulty. By the 22d, therefore, very little way had been made, though the opportunity was taken to employ themselves in catching fish, of which they obtained a large supply. An inlet being now discovered, Commander Ross was sent to examine whether it contained any good harbour; in which

Greenland.

Defective steam-engine.

case it was determined to put in, and repair damages. The report was, that a cove had been found, perfectly safe, but so small that it would merely receive the ship. The bay, when entered, was seen to open into two magnificent inlets, bordered by rocks of imposing form; and every spot, not absolutely a precipice, was covered with such bright verdure as to justify the appellation of Greenland. In sailing upwards, the unexpected appearance of a Danish flag surprised the crew, and they learned that they were now near a settlement belonging to that nation, called Holsteinborg. The governor had seen the masts above the rocks, and, apprehensive of their being those of a vessel in distress, kindly sent an offer of aid. The party were immediately conducted to the village, where they got a hospitable reception, with entertainment such as they little expected on those dreary shores.

Greenland Harbour.

Danish settlement.

The settlement of Holsteinborg lies in 66° 58′ N. lat. and 53° 54′ W. long. The governor, named Kall, and the clergyman with his wife and family, are the only European inhabitants. The place consists of about forty huts; the church, which can contain two hundred persons, is well attended, the Danish sovereign displaying a laudable concern for the spiritual welfare of his Arctic subjects. The vicinity is, of course, devoid of trees, but abounds with angelica, scurvy-grass, and sorrel: and in the principal garden, salad, radishes, and turnips, are reared. The people are exclusively employed in hunting and fishing. About 3000 rein-deer skins, and a quantity of whale and seal oil, varying according to the fluctuations of the season, are annually exported to the mother-country.

Holsteinborg.

A singular casualty had occurred here, which proved of great benefit to the expedition. The Rookwood whaler, from London, having struck on a rock near Woman's Islands, had put in to refit; but proving to be damaged beyond repair, she was abandoned, and now lying a complete wreck. A part of her stores had been sold to the Danes, and the remainder left in the custody

Fortunate casualty

CHAP. VIII.

Unexpected supplies

of the governor, who took a great interest in the adventurers, and offered any thing belonging to the vessel which could be of service to them. Captain Ross thus found himself, as it were, in a dockyard. The mizzen of the Rookwood, without any trouble, was fitted in instead of his damaged foremast. The provisions were raised to their full complement, the owner being referred for payment to Sir Felix Booth. Some boots and gloves were obtained from the natives, and the governor made a useful present of six Esquimaux dogs.

Disco Island.

On the 26th, the discoverers sailed to the northward; and on the morning of the 28th, the stupendous mountains of Disco Island, long enveloped in mist, burst on their view only a few miles distant. The range nearest the shore was entirely free from snow, and the interior hills were but partially covered. Hare Island was almost equally clear; and though forty icebergs were observed, yet, as the navigators approached the latitude of 74°, near to where the Hecla and Fury had been beset in 1824, not a vestige of ice was perceived. They might have fancied themselves sailing on the summer seas of England, or even of the Mediterranean: the men threw off their jackets, and worked in their shirts, without shoes or stockings. They had several times recourse to the engine; and though, from practical defects, it never enabled them to sail above a mile and a half an hour, yet as, without it, they could have made no way at all during these calms, the opinion in favour of steam-navigation in the Arctic ocean seems in principle confirmed. On the 6th August, a thick fog having dispersed, the coast was suddenly displayed, with all its high lands, among which Cape Byam Martin was conspicuous, covered with snow. On reaching the entrance of Lancaster Sound, and reverting to the blame imputed to him for not having explored it, the captain observes that, from the deceptive appearances presented by bays and inlets, similar mistakes had been made by Cook and other navigators of the greatest skill. No opinion differing from his had been expressed by any one of his

Lancaster Sound.

officers, who, if they entertained any such, were unquestionably bound to have stated it. The ice, moreover, lay then so thick, that he could have penetrated but a few miles further. Now, however, he sailed through the middle of the strait, perceiving scarcely any trace of ice or snow, unless on the tops of the lofty mountains. The thermometer stood at 40°; while the sensible heat was so much greater, that they felt it agreeable to dine without a fire, and with half the skylight removed. For two days they made only a slow and laborious progress by the aid of steam; but on the 9th a welcome breeze sprung up from the east, and, all sail being set, on the 10th they passed Cape York, after which the land begins to turn southward, and, with the opposite coast of North Somerset (Boothia), forms the broad opening of Prince Regent's Inlet. This being the channel by which Captain Ross hoped to accomplish his passage, he immediately steered across, and reached the western shore on the afternoon of the 11th, between Cape Seppings and Elwin Bay.

Unusually mild weather.

In sailing southward along this coast some heavy gales were encountered; and the ice having been broken off in the various forms of streams, packs, and bergs, the full difficulties of Arctic navigation began to be experienced. These were increased by the near approach to the Magnetic Pole, so that the compass ceased to traverse; and the bearings could be ascertained only by observations on the sun, which was often obscured by heavy fogs. The navigators made their way, however, and on the 12th descried the place of the Fury's wreck, with the poles of the tents standing; but, to their mortification, a strong current carried them from the spot, and even out to sea. With great exertion they regained the coast, at what proved to be the opening of a very extensive bay, which was named Adelaide. They were then considerably beyond the desired point, and, with great efforts against wind and tide, came again in sight of the Fury's station.

Heavy gales

Adelaide Bay.

They hastened, with intense interest, to examine this

CHAP. VIII.

Wreck of the Fury.

spot, on the state of which the success of the voyage and their very means of existence in some measure depended. The hull of the ship, which was left on the beach, had disappeared, without even a vestige remaining. The moving masses of ice had either carried it out in a body, or broken it into fragments, and scattered it as driftwood over the surrounding sea. But it was an ample compensation to find that the canisters of preserved provisions, after being exposed during four years, were in as perfect condition as if they had been newly prepared. The tightness of these vessels had prevented the bear from smelling the rich feast which they contained for him, and to which otherwise he would soon have forced his way. The wine, spirits, sugar, bread, flour, and cocoa, were, with little exception, equally good, and the sails were found in complete preservation. By an occurrence as singular as it was interesting, did they obtain, on this remote and desolate shore, a supply as abundant as if they had been lading at Wapping or Rotherhithe. After taking in all the provisions they could conveniently stow, raising their stock to two years and three months' supply, the accumulated pile seemed scarcely diminished. Here, also, they fortunately procured a store of coal.

Provisions of the Fury.

Supply of coal.

Thus provided, they again set out on their career of discovery. Crossing the broad mouth of Cresswell Bay, they reached, on the 15th August, a cape to which the name of Garry has been attached, the farthest point seen by Captain Parry. The land now trended in a south-south-west direction, which, with few variations, it continued to follow. Deprived of all aid from the compass, and often enveloped in fogs, they worked their way slowly, amid many difficulties and frequent dangers, being obliged to steer merely according to the direction which the wind, or even the floating ice, had, in the last clear interval, been observed to pursue. While mountains of ice were tossing around them on every side, they were often forced to seek safety by mooring themselves to these formidable masses, and drifting with

Difficulties encountered.

them, sometimes forward, sometimes backward. In this manner, on one occasion, no less than nineteen miles were lost in a few hours; at other times they underwent frequent and severe shocks, yet escaped any serious damage. Captain Ross draws a lively picture of what a vessel endures in sailing amid these moving hills. He reminds the reader that ice is stone, as solid as if it were granite; and he bids him "imagine these mountains hurled through a narrow strait by a rapid tide, meeting with the noise of thunder, breaking from each other's precipices huge fragments, or rending each other asunder, till, losing their former equilibrium, they fall over headlong, lifting the sea around in breakers, and whirling it in eddies. There is not a moment in which it can be conjectured what will happen in the next; there is not one which may not be the last. The attention is troubled to fix on any thing amid such confusion; still must it be alive, that it may seize on the single moment of help or escape which may occur. Yet with all this, and it is the hardest task of all, there is nothing to be acted,—no effort to be made,—he must be patient, as if he were unconcerned or careless, waiting, as he best can, for the fate, be what it may, which he cannot influence or avoid." He conceives, however, that his little bark, merely by its moderate draught of water, was much better fitted for such a navigation than the larger vessels employed in previous expeditions; and that those of Captain Parry would have been shattered to pieces by the rocks over which the Victory was carried in safety.

Dangers of an arctic voyage.

Sudden catastrophies.

On several points of this coast they observed Esquimaux tents; at one place twenty in number, but none of the natives. Many whales appeared on the surface of the water close to them, without showing any apprehension of man; whence it is inferred that a rich harvest would be reaped by any vessel which should first venture upon these shores.

Esquimaux tents.

Among the leading features of the coast was Brentford Bay, of considerable extent. with some fine har-

Brentford Bay.

CHAP. VIII

Boothia.

bours, thirty miles beyond Cape Garry. Here the captain landed, displayed his colours, and, drinking the king's health, took possession, in his majesty's name, of the land, to which he gave the name of Boothia. Port Logan proved a good harbour, but without any deep inlet. Far south of this, Elizabeth and Eclipse harbours, closely adjoining each other, were found to be extensive and commodious. Immediately beyond the latter appeared Mary Jones' Bay, large, but encumbered with ice.

Progress made.

Under all these impediments, in the course of August and September, he worked his way along 300 miles of undiscovered coast, and to within 280 miles of the point which Captain Franklin had reached. Here the land, taking a westerly direction, seemed to afford the fair promise of a passage between the country now surveyed and the continent of America. But by the end of September snow began to fall thick; the thermometer sunk far below the freezing-point; while ice in large masses was closing around them. They therefore considered themselves fortunate when, in a spacious bay between a rocky island and two icebergs, they found a station in Felix Harbour, in which, after due arrangements, they could reckon on passing the dreary season in security.

Winter harbour.

On the 7th October, by sawing through the ice, the vessel was placed in the position where it could be most advantageously lodged for the winter. On the 8th, there appeared no longer an atom of clear water; and, except some occasional points of rock, "nothing but one dazzling and monotonous, dull and wearisome extent of snow was visible." The temperature, which had been ranging between 10° and 22°, rapidly fell, and on the night of the 20th descended as low as 9° under zero, or 41° below the freezing-point, and before the end of the month was at minus 16°. Captain Ross makes some interesting observations on the power of the human frame to resist cold, which appears to vary remarkably in different constitutions. His general conclusion is, that

Endurance of cold.

the ruddy, elastic, florid, or clear-complexioned man, endowed with what physicians call the sanguine temperament, has a peculiar power of retaining heat; while those having pale, flabby, and sallow countenances, whose temperament is said to be phlegmatic, or melancholic, are very unfit for enduring the rigours of an Arctic winter. The most ample clothing will not compensate the deficiency, having power only to retain the internal heat; but if this be wanting, one might as well attempt "to warm a piece of ice by means of a blanket." He places his chief reliance on abundance of food, the failure of which would inevitably lead to starvation from cold. It is considered, therefore, a primary object to secure a full supply of the best victuals; and any restriction in this respect should be adopted only in cases of extreme necessity. The enormous quantity with which the Esquimaux cram themselves appears to conduce greatly to their endurance of cold,—an effect heightened by the peculiarly fat and oleaginous quality of their diet. The captain regrets that British seamen should give way to their natural antipathy to such food, which seems not insurmountable, since patients in hospitals, treated with fish-oil for the cure of rheumatism, often acquire an extreme fondness for it.

Abundance of food.

Winter arrangements.

In preparing for the gloom and rigour of this long winter, he made some improvements even upon the admirable arrangements of Captain Parry. The vessel was previously cleared of the steam-engine, from which no farther benefit could be expected. All the crew saw with pleasure its last fragment removed, and valuable space thereby gained for stowage. The upper deck having been covered two feet and a half deep with snow, it was trodden down to the consistence of solid ice, and sand spread over it till it resembled a rolled gravel walk. It was then roofed with canvass, obtained from the spare sails of the Fury and Rookwood, which was conducted over the sides till it united with a bank of snow that had been formed around the vessel, thus completely fencing it in on every side. The vapour from the steam-

CHAP. VIII.

Heated vapour.

kitchen and oven, instead of being allowed to spread through the cabins, was conveyed by apertures in the upper deck, over which were placed to receive it iron tanks, with the open side downwards, where it soon froze, and the ice was cleared out once a-week. By this plan the apartments were preserved perfectly dry, and it was not necessary, as formerly, to keep them up to the temperature of 70°, in order to prevent the vapour from freezing on their sides; that of 45° was found quite sufficient for health and comfort, and a great saving of fuel was in consequence effected. Two small ante-chambers were formed, and in the outer one such of the men as had been exposed to the atmosphere were required to leave the clothes on which snow had fallen. The air necessary to produce combustion was introduced by a copper pipe direct to the fireplace, where it was immediately warmed, and, instead of chilling, served to heat and dry the room. The strength and spirits of the crew were supported by regular meals and constant occupation. Divine service was duly performed, and religious instruction dispensed at a school held every Sunday evening. This was considered, not only to have a salutary effect on their general conduct, but in a particular manner to promote mutual union and harmony. On the other nights a school also was attended; and with such ardour did these gallant tars apply themselves to repair the deficiencies of their education, that it was a subject of regret to many of them when the termination of the long winter interrupted their studies.

Antechambers.

Religious services.

Abundant provisions.

The stock of provisions, on examination, was found sufficient for two years and ten months at full allowance, —a quantity which could easily be managed so as to last three years. Fuel was equally abundant. The only article deficient was spirits, of which there was only one year's full supply; but this want the commander by no means regretted, being satisfied that their habitual use impaired the strength of the seaman, diminished his power of enduring cold, and rendered him more liable to scurvy. He was gratified, therefore, when the crew

cheerfully consented to their being withheld, unless on special occasions; and he considers this circumstance as having remarkably contributed to the preservation of their health. In fact, the end of the year arrived without any illness, except that of the armourer, who had imprudently engaged in the voyage while labouring under a fatal disease, which the climate might aggravate, but had no share in producing. The rest were in a good state, not only of health, but of spirits, having felt scarcely any weariness, although they had not sought to dispel it by light amusements.

Disuse of spirits.

The year 1830 opened with an incident which greatly enlivened the gloom of the succeeding winter. Traces of Esquimaux had been observed on different parts of the coast; but none had been hitherto seen. At length, on the morning of the 9th January, a party were discovered by a seaman from the observatory. Captain Ross immediately proceeded to the spot; upon which they retreated, but soon returned with a body of their companions, ranged in a line of ten in front and three deep, one man being detached, who appeared to be sitting in a sledge. The captain having sent for his nephew and some of the crew, desired them to remain behind, while he walked towards the Esquimaux, who were armed with spears and knives. He hailed them by the well-known national salutation, *Tima! tima!* which was shouted by them in return. The navigators then advanced, and throwing away their guns, called out, *Aja, tima!* upon which the others tossed their knives and spears in the air, repeating the shout, *Aja!* and extending their hands to show that they had now no weapons. As they stood still, however, the discoverers approached, and embraced all those in the front line, stroking their dress, and receiving in their turn this customary greeting. Their gratification was testified by laughing, clamour, and strange gestures; thus full confidence was at once established between the two parties.

Appearance of natives.

Interview

Mutual greeting

These barbarians were found to be most comfortably

CHAP. VIII.

Native clothing.

clothed in a double covering of deer-skin, having the hair both within and without. They possessed knives pointed with iron, one of which bore the mark of English manufacture; and being prevailed on to enter the ship, they each received with the utmost delight the present of a piece of iron hoop. They did not manifest surprise at the vessel itself, nor at the wall of snow by which it was guarded, but were struck with astonishment on seeing themselves in a mirror, and at the engraved portraits of their countrymen from drawings made in former voyages. Some preserved meat of excellent quality was placed before them, which they began to eat, one of them even declaring it to be good; but, on being cross-questioned, he confessed that he had not spoken the truth. He was then permitted to lay it aside; and being regaled with oil, pronounced it to be "really good." The others, taking courage by his example, threw away also the offered treat, and betook themselves to their favourite mess.

Sight of a mirror

Visit to the Esquimaux village.

Next day the discoverers visited this people at their own village, which consisted of twelve snow-huts, constructed in the very same manner as those observed by Captain Parry. This tribe were thought, on the whole, to be cleaner and better dressed than those more to the northward; besides, they kept a store of seal and reindeer buried in the snow,—a precaution not before noticed among any Esquimaux.

Continued intercourse.

While the British remained on these shores, they held frequent intercourse with this and other parties of natives; and we shall endeavour afterwards to collect into one view their observations, so far as any new light is thrown on the habits and character of this remarkable race. It concerned the navigators more immediately to discover that this horde wandered as widely as those who occupied Melville Peninsula, and that they had equally in their peregrinations acquired a considerable extent of geographical knowledge. Some of the places about Repulse Bay being named and described, they showed an intimate acquaintance with them, stating

that they had recently journeyed from that quarter. Two of them, Tulluahiu and Ikmallik, drew a sketch of the line of coast by which they had travelled, and this was amended by a learned lady, Tiriksiu. The general result proved to be, that between the present station and Repulse Bay there intervened a very extensive gulf, of which the limits were Melville Peninsula on the east, the American coast on the south, and the country in which they now were on the west. The grand question, whether there was any navigable opening farther westward, could not be then ascertained, though they had reason to believe that, if there was, it must be very narrow. The strongest interest, however, was excited by the accounts given by another party of a great sea lying to the westward, and of a strait which it was hoped might lead into it. On the 5th of April, therefore, when the rigour of winter had somewhat abated, Commander Ross, with Mr Blanky the chief mate, and two native guides, undertook an expedition to explore it. The weather being still very inclement, they were frequently obliged to pause and seek refuge from the drift, when the Esquimaux in half an hour erected snow-huts, which afforded tolerable shelter. Unluckily the fire necessary for heat and light, melting the walls of this frail tenement, enveloped them in moisture, to avoid which they were obliged to creep into their fur-bags. After a difficult journey of three days, they reached a bay facing the westward, and, on proceeding a short distance inland to the south and south-east, discovered a very extensive lake, called by the natives Nei-tyel-le, whence a broad river flowed into the bay. On their return to the coast the guides pointed out a lofty cape, beyond which there was said to be a vast sea, the termination of which could not be descried. They declared, however, that a tract of land, or isthmus, connecting the territory on which they stood with the continent of America, would render it impossible for the vessel to reach the western sea in this direction, or otherwise than by a channel considerably *north* of her present station.

Native geographical delineations.

Western Sea.

Inland lake.

CHAP. VIII.

Disappointment.

The journey so far had issued only in disappointment; but they learned that, on the coast nearest them, facing the eastward, there was a place called Shagavoke, where the water rushed through a narrow strait with extraordinary rapidity: hence arose hopes that this tide might come from the opposite sea, and afford a channel through which the ship could be worked. The natives, indeed, discouraged every such idea; but on a point so deeply affecting the principal object of the voyage, it was thought improper to rest satisfied with any thing short of ocular evidence. Commander Ross, therefore, on the morning of the 21st, set out with a fresh guide; and travelling, regardless of all inconvenience, fifty miles in the day, he reached the place before midnight. The channel at its entrance was about five miles broad, but four miles upwards it narrowed to 120 feet; and this small space was so encumbered with rocks, that it appeared doubtful if even a boat could effect a passage. The question proved of very little consequence, since, on tracing it farther, though the strait widened, it became ultimately a mere inlet, the rapidity of the current being derived from the large quantities of snow, by the melting of which it was fed. Every idea of a passage south of the ship's present station was renounced. On their return, a somewhat ludicrous incident occurred: the dogs ran off with the sledge over the rough ice, when the stores and instruments were scattered in every direction, the guide testifying his amusement by shouts of laughter.

Second overland journey

Northern overland journey.

It was to the north that all hopes of finding the desired passage were now directed. Some of the natives having mentioned a place in that quarter, whence they considered it possible to get round by sea to Nei-tyel-le, Commander Ross undertook a journey thither on the 27th of April, accompanied by Abernethy the mate and two native guides. After encountering many hardships, they discovered, on the 1st of May, from the top of a high hill, an inlet, which might possibly reach the western sea; but the numerous obstacles which inter-

vened, and the exhausted state of the party, obliged them to return without ascertaining the point. Its aspect, however, was unpromising; and the most intelligent natives intimated that the only channel was in a much more northerly quarter, supposed to be no other than Barrow's Strait, through which Captain Parry had already navigated.

Native advice.

Before prosecuting further discoveries in this direction, another journey was resolved upon to the westward, beyond the isthmus, to trace the coast of America as it extended along the newly discovered sea. They thus hoped to reach Cape Turnagain, and to connect their discoveries with those of Captain Franklin. The younger Ross again set out on the 17th May, with three companions, eight dogs, and provisions for twenty-one days; and on the 19th, having crossed the great middle lake of the isthmus, he reached his former station on the western sea. The first view of it was celebrated by three loud and even joyous cheers, though tempered with regret at the diminished prospect of ever being able to navigate it. Having to spend the night here, they contrived a more comfortable sleeping-place, by excavating a sort of burrow in the snow, roofing it with their skin-boat, and placing a block of snow as a door.

New western journey.

After passing Cape Isabella, formed of gray granite 500 feet high, the party travelled along the coast west and north for twenty miles. On the morning of the 21st May, they discovered, behind a lofty point, an inlet, which, from its breadth and the different character of its opposite coasts, afforded the hope that it might open into the Polar ocean. They therefore made a complete circuit and a careful survey of its shores; but the only opening found was clearly ascertained to be the mouth of a river, named by them Garry. On ascending a high hill, they perceived several large lakes extending to the north-east, and forming in fact an almost continuous chain to Thom's Bay, near the Victory's station; with interruptions enough, however, to prevent a ship

Cape Isabella.

CHAP. VIII.

Crossing the ice.

passing through. Next day they proceeded north-west along the coast; but resolving to reach the opposite land some miles distant, they crossed the frozen surface of the strait, and came to a large island, which was named Matty. They pursued their fatiguing journey along its northern shore, over rough ice; and passing another narrow strait, which they called Wellington, found themselves on the mainland of America. The coast now stretched due west, and the surface being level, they proceeded with comparative ease and rapidity. The direction changing to the north-west, they soon arrived at a spacious bay, which was named Parry; they then travelled onwards two days, but with difficulties continually increasing. One great embarrassment, as regarded both their advance and return, was how to distinguish between land and sea. "When all is ice, and all one dazzling mass of white,—when the surface of the sea itself is tossed up and fixed into rocks, while the land is, on the contrary, very often flat,—it is not always so easy a problem as it might seem on a superficial view, to determine a fact which appears in words to be extremely simple." The advancing season, instead of favouring the journey back, might render it very perilous, by converting ice into water, or at least into a soft and sinking mass. But the circumstance which most restricted their progress was the necessity of eating, for the suspension of which they could not forbear indulging some vain wishes. Their stock of provisions, however, not only imposed a limit on their excursion, but encumbered them with a heavy load, which the dogs could no longer assist in dragging. These animals, unable to travel without occasional days of rest, were now completely exhausted, and became themselves a burden. On the 27th, although the food had already been reduced below the full allowance, a still farther diminution was requisite, to render it possible for them to continue the journey two days longer. This, amid such heavy toil, was a very severe privation; yet,

Difficulty of distinguishing land and sea.

Load of provisions.

when the commander made the proposal, he found that the party had of themselves resolved to suggest it to him.

Voluntary privations.

Having deposited every thing that could for the present be dispensed with, they set out on the 28th with only four days' provisions. On the 29th they reached Cape Felix, when the direction of the coast changed to south-west, and there was before them an expanse of ocean, which appeared altogether unbounded. Having travelled along it for twenty miles, their station next morning was in lat. 69° 46′ 19″, long. 98° 32′ 49″. They seemed in the direct route to Franklin's Cape Turnagain, which as many more days as they had already spent in their journey would have enabled them to reach; but for these days the very means of existence were wanting. They had brought with them from the ship provisions for only three weeks; much more than half was consumed, and they had but ten days' very short allowance for their journey back, which was not reckoned at less than 200 miles. They could not, therefore, have a moment's hesitation, though with intense regret and disappointment, to make this the boundary of their progress. The spot on which they stood was named Victory Point, while the most distant one in view, estimated to be in long. 99° 17′ 58″, was called Cape Franklin. At the former place they reared a cairn of stones six feet high, and lodged in it a narrative of their proceedings, though scarcely hoping that it would ever meet the eye of any European.

Cape Felix.

Victory Point.

The return was attended with a considerable increase of suffering. The dogs fell victims to successive calamities, till, of eight, only two remained alive. It was proposed to vary the scene by keeping south of Matty Island, along the coast of the continent; but observing that it formed an extensive bay with winding shores, to follow the sinuosities of which would have consumed too much time, they pushed forward in a direct line over the frozen surface of the sea. On the 8th June, they arrived in a very exhausted state in the neighbourhood of Nei-tyel-le, where they met a party of natives,

Calamities in returning

CHAP. VIII.

Native hospitality.

who received them hospitably, and supplied them so plentifully with fish, that they were able to take a day's rest, and proceed at leisure to the vessel, which they reached on the 13th.

Meantime, Captain Ross himself had made a journey, though of more limited extent, with the intention of surveying the isthmus of Boothia, when he made the partial discovery of another large lake, to which he gave the name of Lady Melville.

Return of spring.

The nephew, upon his return, found that he had arrived just in time. The early spring, the only season when travelling is practicable in this region, was over. The thaw had set in with extraordinary rapidity; the country was under water; the streams impassable; and the surface of the ocean could not have been traversed without the greatest danger. Except a short excursion to procure fish, all their attention and efforts were directed to the extrication of the vessel with a view to her voyage northward, in which direction alone they could now hope to discover a passage to the western sea. But month after month rolled on; the height of summer passed, and the sea remained still bound in icy chains. In August its aspect began to present hopes, but these were followed by successive disappointments. Its close arrived, and they had the mortification to reflect that they had remained eleven months,— a period in which they might have circumnavigated the globe,— fixed to that dreary spot. At last, on the 17th of September, with a transport of joy, they found themselves free, and the ship, so long immovable, again buoyant on the waves. They advanced about three miles, when, encountering a ridge of ice, they made fast to one of its extremities, in a tolerably secure position between two bergs. Next morning, a change of wind and heavy fall of snow confined them to this precarious shelter; and in the evening a heavy gale sprung up, which, on the three following days, drove the icebergs, and the vessel along with them, to the vicinity of some rocks, causing considerable pressure,

Continuance of the ice.

Danger of the vessel.

though no serious injury. On the 23d they were completely frozen in; and by the 30th the sea exhibited one unbroken surface. This state of things seems to have been chiefly produced by the northerly winds which prevailed during the autumn, particularly in September, and continually brought down fresh masses of ice. "It was as if the northern ocean were sending all its stores into this quarter;" and these were driven into the bays, and so closely wedged in by the tides, that they appeared as much a part of the coast as the rocks themselves. The greater part of October was employed in laboriously sawing their way through the ice, the thickness of which was always increasing; and they were at length obliged to desist after reaching a spot not exactly such as could be wished, but which, amid an ocean immovable on every side, afforded tolerable protection. Another dreary winter having now set in, it became necessary to look narrowly into the stock of provisions. A certain reduction in the daily allowance was found requisite, leaving, at the same time, enough to maintain the crew in health and vigour, which they continued to preserve uninterruptedly during the season. They felt, however, the utter monotony of their situation pressing upon them with increasing severity; they began almost to envy the Esquimaux, to whom eating and sleeping constituted the whole of existence. In this manner passed 1830; nor was it till April of the following year that excursions of any extent could be undertaken over the frozen surface of land and sea.

Frozen in.

Second Winter.

The first adventure of this kind was conducted by Commander Ross, who proceeded towards the north, with the view of examining the inlet formerly mentioned, which, from the report of some, they had been led to hope might reach between the two seas. Setting out on the 20th day of the month just specified, after a journey rendered severe by the drifting snows, he arrived on the 24th at the place, in about lat. 70° 38′ 32″. The first distinct view convinced him that it could not

Northern overland excursion.

CHAP. VII

Brentford Bay.

be that described by the Esquimaux, who had represented it as in some parts so broad, that from the one shore the opposite coast could not be discovered. He did not leave it, however, till, by a minute investigation, he had ascertained that it stretched only a small distance inland. There was still another opening at Brentford Bay, in lat. 71° 55′; but this as yet they had not examined, and he had not provisions enough for travelling to so distant a point.

Second expedition.

On the 15th May the two principal officers set out together on another trip, crossing the country in the direction of the chain of lakes which had been observed from the inlet on the west coast. They passed along the river Lindsay, and also that of Saumarez, situated farther south; then a large lake, which they named Krusenstern after the eminent Russian navigator; next a smaller, with the appellation of which Captain Jekyll was complimented; and afterwards two others, to which the name of Professor Hanstein was assigned. The short intervals between these large sheets of water were filled by smaller ones, so that there was scarcely an interruption across the whole continent; though it is more than probable that there will never exist any motive to complete this natural communication. Taking a new direction, Captain Ross reached Cape Isabella, whence he returned, while his nephew proceeded along the western coast.

Discovery of the Magnetic Pole.

The discovery of the Magnetic Pole, which the observations of Captain Parry showed to be situated in this quarter, was one of the leading objects in the present voyage; there being every where a great desire to obtain all the light that could be thrown upon the mysterious agency by which vessels trace their path through the ocean. Calculations made by the learned in Europe had placed this interesting spot in lat. 70° north, and long. 98° 30′ west. Commander Ross, in his expedition of 1830 along the coast of America, when near Cape Felix, had approached within ten miles of it; but from the want of the necessary instruments, he

Magnetic expedition.

was unable to make the requisite experiments. After his return to the vessel, however, a long and careful series of observations led him to the conclusion, that the above position had been erroneously assigned, and that the real point lies in lat. 70° 5′ 17″ north, and long. 96° 46′ 45″ west, which would place it on the western coast of Boothia. To this point, therefore, he directed his course. The journey was tedious and laborious, not only from the rigour of the season and the ruggedness of the surface, but from the care with which he examined every inlet and remarkable object. He set out on the 27th May, and on the 1st June, at eight in the morning, reached the spot to which his calculations referred. The instruments were the same day put in operation. The amount of the dip was 89° 59′, being only one minute less than 90°, the vertical position, which would have precisely indicated the polar station; and the horizontal needles, when suspended in the most delicate manner possible, did not show the slightest tendency to move. He looked, however, in vain for some object to mark so important a fact in physical science; for there was merely a low flat coast, rising about a mile inland into ridges fifty or sixty feet high. "Nature had here erected no monument to denote the spot which she had chosen as the centre of one of her great and dark powers." The commander, notwithstanding, placed upon it a flag, and to the locality has since been assigned the name of William IV.; he also erected a cairn of some magnitude, in which was lodged a record of his visit. The state of the provisions did not allow him to proceed more than a few miles farther along the coast, which he saw still extending ten or twelve miles in a continuous line due north. It was conjectured, though of course without any certainty, that it follows the same direction till at Cape Walker, in lat. 74° 15′, it joins the northern coast of the peninsula discovered by Captain Parry.

Monotony of the scene.

Memorial Cairn.

As soon as he returned, it was thought time, amid alternate hopes and fears, to watch the progress of the

CHAP. VIII.

Partial breaking up of the ice.

ice, and escape, if possible, from the prison of a third dreary winter. The season was not, on the whole, more favourable than that of 1830; yet, on the 28th August, a somewhat earlier period, they contrived to warp out into the open sea, and on the morning of the 29th were in full sail. Changes of wind prevented them from making more than four miles, and at evening the threatening aspect of the weather induced them to take shelter at the mouth of a small bay, which formed a secure harbour. They had cause to rejoice in having found this refuge, as a heavy gale came on, with a storm of snow; and next morning, from the top of a hill, they saw nothing but one heap of hummocky ice, which had completely blocked up their former harbour.

Disappointment.

They now anxiously watched an opportunity of getting themselves again afloat, and were occasionally cheered by a transient hope, which proved quickly fallacious. On the 14th of September they were little gratified to find that they could again take exercise by skating on the newly formed ice. On the 27th, the painful alternations of hope and disappointment were terminated, inasmuch as they found themselves completely fixed for a third winter. Their last year's navigation had been three miles; this season it was extended to four.

Abandonment of hope of extricating the vessel.

The spirits of the adventurers now began to droop in earnest. They soon became sensible that, at all events, it would be most perilous to wait another season in the hope of extricating the vessel, in which they could never return to England, and had no alternative but to abandon her amid the Arctic regions. Their only means of escape was to proceed in the boats, or draw them over the ice, to the wreck of the Fury, when, after supplying themselves with a fresh stock of provisions out of her stores, they might reach Davis' Straits, and return in one of the whale-ships. It was proposed, before abandoning the vessel, to place her in a situation where she might sink, and be drawn up by some future navigator. Observing that the preserved meats brought out in the Fury in 1823 remained, after the lapse of

eight years, as perfect as at first, it was imagined that they would keep for a period altogether indefinite; and that possibly, after the lapse of centuries, another generation might from these specimens discover the style of cookery adopted in England at the present day.

Symptoms of scurvy.

About the end of November, considerable alarm was excited by symptoms of scurvy appearing in one of the crew. The extraordinary exemption hitherto enjoyed from this dreadful malady, in the absence of the grand specific of vegetable food, Captain Ross is inclined to ascribe to the abundance with which the men were supplied with water, notwithstanding the quantity of fuel requisite to melt the snow; to their never having been too long at once exposed to cold; and to the care that was taken not to allow them to remain in their wet clothes. Constant employment and exercise were also provided; and no little advantage is ascribed to the precautions against mental depression, and to the withholding of the usual allowance of ardent spirits.

Observations on the natives.

As no further communication was henceforth held with the Esquimaux, we shall, before tracing the return of this adventurous crew, bring together the particulars observed by them respecting that people. It is unnecessary, indeed, to enter into much detail, as they are evidently the very same race observed by Captain Parry. Their snow-houses, their dogs, their mode of hunting and fishing, were precisely similar. In regard to food, they seem to have displayed a greater degree of foresight, having often large stocks in reserve; so that a ton of salmon was once purchased from them with articles which had cost only about 7s. 6d. Yet they manifested the same extraordinary appetite which had astonished a former expedition. On one occasion, a party of them were invited to what seems to have been considered only as a lunch; yet it amounted to fourteen pounds of raw salmon for each person. In this enormous eating, they sought, not merely to satisfy hunger, but also the gratification of their gross desire, making pauses to recruit their powers, and then beginning afresh.

CHAP. VIII.

Enormous eating.

Commander Ross conceives that, with plenty before them, nothing will ever induce them to stop, except the absolute impossibility of forcing another morsel beyond the top of the throat. They retained the same distaste for European luxuries. When they found a store of rum and lemon-juice deposited for the use of the officer just named in one of his expeditions, they carefully emptied these liquors out of the vessels as "very dirty water."

Thefts.

The intercourse had not continued long, when instances of petty theft began to be discovered, consisting chiefly in their abstracting iron and glass articles,—a pair of snuffers, a hammer, and a reading-lens. The navigators soon found themselves possessed, in the eyes of the natives, of the power of conjuration, effected, as was supposed, by their scientific instruments, and still more by their arms; on the firing of which, it was immediately asked "what the guns had said." Of this impression they availed themselves somewhat too largely, in awing the people into confession and restitution. When detection took place, the thieves were derided by their neighbours, and considered as having the laugh against them, rather than as the objects of due censure. The same very slight degree of disgrace was incurred by the falsehoods in which they occasionally indulged.

Matrimonial arrangements.

Their matrimonial arrangements are more singular, and in some points more exceptionable, than could naturally have been expected. Convenience and interest seem the ruling motives. A widow left with a large family, and without property, is with us considered an object peculiarly helpless; but in Boothia she ranks as a great heiress, and is immediately surrounded by pressing suitors.

Value of children.

The deeply felt obligation on the part of children to assist their parents, even by marriage, renders them a species of treasure, without which the former may, in old age, be reduced to extreme distress. More culpable accommodations are sometimes procured by polygamy, even in the form of two men having one wife, and by an exchange of wives, either permanent or temporary.

On the whole, the conduct of the Esquimaux to their visiters was friendly, good humoured, and, when occasion required, even liberal. To this there was only one remarkable interruption. As Commander Ross, with two companions, was setting out on a journey, he approached an Esquimaux village; when, instead of the usual cheerful shouts, he was much surprised to be received in deep and gloomy silence. The women and children had been sent away, a usual prelude to combat, and the men were furiously brandishing their weapons. One old man, with the tears streaming down his cheeks, rushed out of a hut, and was about to throw at them the large knife used in attacking bears, when his arm was arrested by one of his sons. The natives, however, with a threatening aspect, attempted to surround the visiters, and their numbers rendered them formidable; but the levelling of a gun induced them to fall back. The two parties, nevertheless, maintained a hostile attitude, until one of the women rushed forward and disclosed the mystery. A fine boy, the adopted son of the enraged old man, had been killed the preceding night by the fall of a stone,—a catastrophe which the strangers were believed to have produced through the supernatural powers which they were supposed, and, as we have seen, had admitted themselves to possess. They now solemnly abjured those pretensions, which they had injudiciously advanced; and the people, being with much difficulty persuaded that they had no concern in the boy's death, made every effort to obliterate the impression caused by symptoms of anger proceeding from an imaginary cause.

Friendly and liberal conduct.

Hostile feelings excited.

The navigators, on taking a general view of their intercourse with these people, had the satisfaction to reflect, that they had supplied them with some useful tools and materials, and had even instructed them in the art of making nets, the value of which was fully appreciated, though it seemed doubtful if they would ever have the means of forming them on any adequate scale. An Esquimaux having lost his leg, a wooden

Beneficial intercourse

CHAP. VIII.

A wooden leg supplied.

one was constructed in its place,—a truly precious gift, by which he was converted from a helpless object to an active and efficient hunter. His gratitude was extreme; in testimony of which, he pressed the services of an eminent Angekok, to cure by conjuration the armourer, then in the last stage of illness; but this was too serious a case to admit of trifling. It was also a satisfactory reflection, that they had not taught them the use of spirits, had communicated no diseases, and had done nothing to make them discontented with the humble condition in which they were placed.

Abandonment of the Victory.

As already stated, the discoverers had abandoned every hope of returning home in the Victory; and they durst not even venture to await the period when her extrication might have been possible, as it would then have proved too late to attempt their journey over the ice. They therefore determined to move as early in the spring as travelling should be found practicable. The task was very laborious, as they had not only to proceed on foot, but to drag provisions and boats over a vast expanse of rugged ice. The only thing which rendered the undertaking hopeful, was the prospect of finding on Fury Beach an ample store of boats and provisions; though this spot was distant 180 miles in a direct line, which, by the necessary windings, would be extended to 300. The plan was, first to carry forward the boats and a portion of food a certain length, depositing the former in a convenient position, in the event of its becoming necessary to fall back upon them. The party were then to push forward to the wreck, and ascertain whether the valuable supplies which had been left were still to be found.

Stores on Fury Beach.

Difficulties encountered.

On the 23d April 1832 they set out on the first part of their expedition. The loads being too heavy to be carried at once, made it necessary to go back and forward twice, and even oftener, the same day. They had to encounter dreadful tempests of snow and drift, and to make circuits in order to avoid impassable barriers. The general result was, that, by the 21st May, they had

travelled 329 miles to gain 30 in a direct line, having in this labour expended a month. CHAP. VIII.

Final leaving the vessel.

After this preliminary movement, they returned to the ship, of which they were soon to take a final leave. On the 29th May they hoisted the colours, nailed them to the mast, and drank a parting glass to the Victory, which they considered worthy of a better fate. Captain Ross describes himself as deeply affected; this being the first vessel he had been obliged to abandon, of thirty-six in which he had served, during the course of forty-two years. In a few days they reached their former deposit; and the men, extremely exhausted, were anxious to leave the boats and spare provisions and push on to Fury Beach. The captain, however, considered it indispensable to carry these to the other side of Elizabeth Harbour, as the nearest spot to which there was full security of being able to return. The 9th June arrived before every thing was brought forward to that point: it was soon after arranged, that his nephew and two others should set forward as a light party, with a fortnight's provisions, to ascertain the state of the supplies, and then return with their report to the main body, who were to proceed by slower marches, but more heavily loaded.

Examination of the coast.

On this laborious journey Captain Ross had an opportunity of examining the coast, and ascertaining that the large inlet in Brentford Bay was formed merely by a river, and could afford no passage to the western sea. On the 25th June he met the advanced party, who reported that they had found three of the boats washed away, but enough still left for their purpose, and all the provisions in good condition. On the 1st July the whole crew reached their destination. They immediately enjoyed a hearty meal, and soon reared a canvass mansion, which they named Somerset House.

Fitting out boats.

The month of July was spent in fitting out the boats, which were ready by the 1st of August, when there appeared a considerable extent of open sea, cheering them with the hope of being able to penetrate through Bar-

CHAP. VIII.

Difficulties of the voyage.

row's Strait into Baffin's Bay. The voyage, however, proved very difficult; masses of ice, still tossing amid the waves, placed them sometimes in dangerous positions; and when they sought shelter on the beach, it was mostly bordered by lofty precipitous cliffs, from which, at this season of thaw, fragments were often detached, one of which might have crushed them to pieces. It was the 29th August before they passed Cape Seppings, and arrived at the junction between Prince Regent's Inlet and Barrow's Strait. After several attempts to run along the latter, rendered fruitless by the ice, they were obliged to haul the boats on shore and pitch their tents. There was still time to have accomplished their object; but repeated surveys from the neighbouring mountains convinced them that Barrow's Strait was now, and had been during the whole summer, an impenetrable mass. By the 24th September all were agreed that no choice was left but to return to Fury Beach, and there spend their fourth Arctic winter. Proceeding therefore in the boats, on the 30th September they reached Batty Bay, more than half the distance; but the ice rendering it impossible to sail farther, they hauled them on shore, and left them above high-water mark. Then, carrying the provisions on sledges, and making a somewhat difficult journey, they arrived on the 7th October at what they now accounted their home.

Return to Fury Beach.

Winter station.

The party suffered at first a good deal from cold, against which their canvass covering afforded very imperfect shelter. They contrived, however, to envelop it in a wall of snow, and set up an additional stove, which was so effectual, that the heat of 51° could be maintained within. It was necessary to make a reduction in the allowance of preserved meats; bread was somewhat deficient; and the stock of wine and spirits was entirely exhausted. However, as they had caught a few foxes, which were considered a delicacy, and there was plenty of flour, sugar, soups, and vegetables, a diet could be easily arranged sufficient to maintain the party in health and vigour.

The winter, as it advanced, proved one of great severity; and when the cold reached its utmost rigour, their slight walls could no longer keep the mansion in a comfortable heat. The tempestuous weather made it impossible to take exercise in the open air; and at length their patience appears to have been wearied out by this long and dreary imprisonment within the Arctic wastes. On the 16th February 1833, Thomas, the carpenter, died of scurvy,—an event deeply regretted in itself, and regarded as a warning of what was too likely to befall the rest. Several of the seamen, in fact, became affected with this cruel disease, of which Captain Ross himself felt the sure approach by the return of pain in his old wounds. Their situation was becoming truly awful; since, if they were not liberated in the ensuing summer, little prospect appeared of their surviving another year.

Rigorous winter.

Fatal effects of scurvy.

In April and May, as soon as it was possible to travel, while yet the ice remained firm, it was necessary to carry forward an ample stock of provisions to the position of the boats, and there wait the opportunities of release. Though the distance was only 32 miles, their reduced numbers, and the weight of the loads, obliged them to go over the same ground eight times, raising the space actually traversed to 256 miles; so that it afforded laborious employment for a whole month. They then returned to Somerset House, where they remained till the 8th of July; on which day the whole party quitted, without regret, this dreary home, and, though much encumbered by the transport of the sick, arrived on the 12th at their boat-station in Batty Bay.

Movements in spring.

The aspect of the sea was now watched with intense anxiety, not unmingled with dread; yet the very habit of observing and of speculating on their prospects,—some daily mounting the neighbouring hill, and others reviewing their report,—kept their spirits in a state of salutary activity. The pursuit of feathered game, which always afforded the hope, and sometimes the reality, of a good supper, also enlivened their time. A month was passed in vain expectation; when at length, on the

Watching the sea.

CHAP. VIII.

Embarkation

evening of the 14th August, a lane of water appeared leading to the northward. Next morning the seamen were in movement at an early hour; and, having cleared the shore of the ice that obstructed it, they embarked the provisions and stores, and by eight o'clock were under weigh, with a favourable wind. At midnight they passed Elwin's Bay, and on the 16th had come to the farthest point reached in the preceding year,—a spot which excited some painful recollections. However, though all passage to the east was closed, there was still an open lane by which they could proceed northwards. In the evening of that day, they were at the north-eastern point of America, and beheld the sea in that direction quite navigable, though encumbered with ice. At three in the morning of the 17th, they were in motion, making their way through the loose pieces, till, favoured by a southern breeze, they turned the point of the solid mass which obstructed the inlet, and saw the wide expanse of Barrow's Strait open before them.

Enter Barrow's Strait.

Wafted on as if by magic, they reached the opposite shore, which they sailed along to within twelve miles of Cape York, having made in this day seventy-two miles. In the two following they passed Admiralty Inlet, and came within six or seven miles of that called Navy Board; after which they were detained four days by contrary winds, and obliged to reduce their allowance of provisions. On the 25th, however, they could again use their oars, and reached the eastern side of Navy Board Inlet, where they found a good harbour for the night.

Ship in sight.

At four in the morning of the 26th, they were roused from sleep by the look-out-man announcing "a sail," which, viewed through a glass, proved evidently to be a ship. All were presently in motion, and their hopes and fears were variously expressed. But they were detained by calms and light shifting airs; and, a breeze springing up, the vessel made sail with a rapidity which left them hopelessly behind. About ten, however, they descried another, which seemed to be lying-to; but she,

CHAP. VIII

Encumbered

evening [illegible] sheet of water [illegible] morning the [illegible] ore; and, having [illegible] it, they ent[illegible] and by eight o'clock [illegible] favourable wind. At mi[illegible] Lyon's Inlet, and on the 16th had [illegible] reached in the preceding year, [illegible] recollections. Ho[illegible] passage to the east was closed, there [illegible] land by which they could proceed north[illegible] morning of that day, they were at the [illegible] western coast of America, and beheld the sea in [illegible] direction quite navigable, though encumbered with [illegible] At three in the morning of the 17th, they were [illegible] ion, sailing their way through the loose pieces [illegible] favoured by a southern breeze, they turned the p[illegible] the solid mass which obstructed the inlet, and s[illegible] wide expanse of Barrow's Strait open before [illegible]

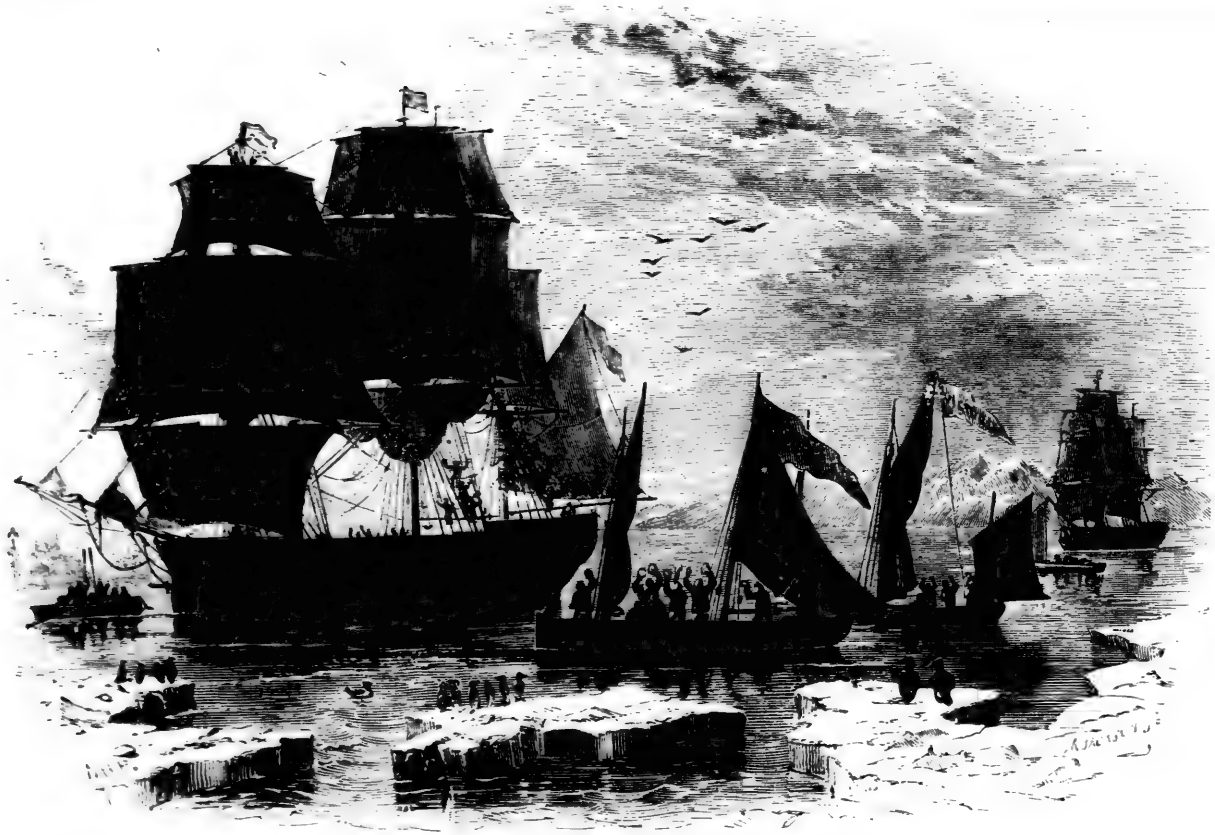
Water [illegible]

Walker [illegible] as if by magic, they reached the op[illegible] shore, which they sailed along to within twelve mi[illegible] Point Turnagain. Here in this day seventy-two [illegible] they passed Admiralty Inlet, [illegible] seven miles of that called [illegible] which they were detained four days [illegible] winds, and obliged to reduce their allo[illegible] provisions. On the 25th, however, they could [illegible] their oars, and reached the eastern side of [illegible] Bay Inlet, where they found a good harbour i[illegible] ship.

Sight [illegible]

At four in the morning of the 26th, they were [illegible] by the look-out man announcing [illegible] which, viewed through a glass, proved evidently [illegible] All were presently in motion, and their [illegible] were variously expressed. But they [illegible] by calms and light shifting airs; and, [illegible] the vessel made sail with a rapidity [illegible] left them hopelessly behind. About ten, however, they descried another, which seemed to be lying-to; but [illegible]

Immediately the yards were manned, and the adventurers were saluted with three loud cheers.—Page 302.



DELIVERANCE OF SIR JOHN ROSS AND HIS PARTY.

Immediately the yards were manned, and the adventurers were saluted with three loud cheers.—Page 302.

also, soon bore up under all sail, and appeared to be fast leaving them. Happily a calm succeeded, and by hard rowing, they approached so near that their signals were perceived, when she was seen to heave to and lower a boat, which made directly towards them. On its arrival, the mate in command asked if they were in distress and had lost their vessel, proffering his aid; stating, in answer to their inquiries, that he belonged to the Isabella of Hull, once commanded by Captain Ross, now by Captain Humphreys. On being told that the former person stood before him, his brain was so puzzled that he declared the captain must be under a mistake, as he had certainly been dead two years. When satisfied, however, of the contrary, and that he was in the presence of the long-absent navigator, he offered his hearty congratulations, and hastened back to the ship with the gratifying intelligence. Immediately the yards were manned, and the adventurers were saluted with three loud cheers. The scene on their arrival may be much more easily conceived than described. "Every man was hungry, and was to be fed; all were ragged, and were to be clothed; there was not one to whom washing was not indispensable, nor one whom his beard did not deprive of all English semblance,—it was washing, dressing, shaving, eating, all intermingled." Then "interminable questions to be asked and answered,"—all the adventures of the Victory, all the English news of four years. At length they were accommodated with every thing, and retired to rest; "and I trust," adds Captain Ross, "there was not one man among us who did not then express, where it was due, his gratitude for that interposition which had raised us all from a despair which none could now forget, and had brought us from the very borders of a not distant grave to life, and friends, and civilisation." Such, however, was the effect of previous hardship, that few of them could sleep on a bed; and some time was necessary to enable them to enjoy this and other accommodations of ordinary life.

The Isabella of Hull.

Reception on board.

Gratification at their release.

Captain Humphreys had sailed up Barrow's Strait in

CHAP. VIII.

search of the Victory, and even attempted to cross Prince Regent's Inlet; but he had been arrested by a field of ice, and was now returning. Having only two-thirds of a cargo, he was obliged to remain for some time in Baffin's Bay. On the 13th September they fell in with the fleet of whalers on the fishing-ground, when all of the captains came on board to welcome the discoverers, and some of them brought presents from their own stores, which were very acceptable. On the 30th September the fishery being no longer practicable, the Isabella left Davis' Straits, and on the 12th October reached Stromness in Orkney. The intelligence respecting the adventurous individuals she had on board spread thence like lightning through the kingdom; for never had any event connected with maritime enterprise, at least in our day, produced so strong a sensation. With the fourth winter hope was almost extinguished in the breasts even of the most sanguine; and Captain Ross with his companions, having been numbered among the many victims who have fallen in this hazardous career, were received now as men risen from the grave. On his landing at Hull, on the 18th, such crowds were attracted that he could with difficulty reach the inn. After receiving the freedom of the town, and a public entertainment, he proceeded next day to London, and having reported himself to the Admiralty, was presented on the morrow to his majesty at Windsor, from whom he experienced a most gracious reception.

Delay in Baffin's Bay.

Arrival at Stromness.

Reception at London.

Rewards to the party.

To this meritorious body of men the public were fully disposed to make a liberal remuneration for their toils and dangers; and government to a certain degree was inclined to second their dispositions. Although no obligations had been incurred, the inferior officers and seamen received double pay from the period of their departure to the time of their leaving the ship, and full pay from that date till their arrival in England. Those who desired, and were qualified, obtained employment and promotion. Commander Ross was insured, after the necessary preparation of another year's service, of being

raised to the rank of post-captain. The surgeon, the gunner, and the purser, were appointed to eligible situations in the navy. Captain Ross alone, apparently from an excess of the laudable spirit of economy, was refused every thing, except the half-pay which had accumulated during his absence, and to which he would have been equally entitled had he remained at home. He had therefore ample ground for an appeal to Parliament; and, in April 1834, a committee of the House of Commons decided, that, considering the importance of the object, and all the circumstances attendant on the expedition, they would not transgress the bounds of a prudent liberality by recommending that the sum of £5000 should be voted to him.

Promotions.

Parliamentary reward.

In taking a general view of this voyage, we do not consider it as within our province to notice any defects which might perhaps be detected in the narrative or chart, but shall simply remark that it has not been unproductive of very important discoveries. Additional doubts have indeed been thereby thrown on the existence, or at least the practicability of a north-west passage. The channel which had for some time been considered as offering the best ground for hope, has been found obstructed by the extensive territory of Boothia.* There remains only the strait to the south of the Georgian Islands, which Captain Parry, in two successive seasons attempted without success. The two other courses mentioned by Captain Beaufort, in his evidence before a select committee of the House of Commons, the one northward through the Wellington Channel, the other south-west from Leopold Island, appear to us to offer very slender promise. An increased probability is however presented, that a vessel which should, in some favourable season, penetrate southward between Banks' Land and Cape Walker, the apparent extremity of Boothia, would find an open and unobstructed navigation to Behring's Strait. However this

Results of the voyage.

Possibility of an open sea.

* See notices of subsequent discoveries respecting Boothia on pages 363–369.

CHAP. VIII

may be, the actual coast discovered by Captain Ross was considerable and important. The northern termination of the American continent is the last of the great boundaries of the earth which has been left for modern enterprise to explore, and to this interesting object he made some important contributions. Even the survey and description of this large insular tract forms a considerable accession to geography. The value of his magnetic observations, too, has been highly appreciated by Professor Barlow, so eminent in this department of science, by Captain Beaufort, and by Mr Children.

Northern termination of the American continent

Captain Back's expedition.

During the deep though desponding interest felt for Captain Ross's expedition, a number of spirited individuals raised a subscription, which, aided by £2000 from government, enabled them to send out Captain Back,—the active companion of Captain Franklin,—to trace, if possible, the fate of the Victory. After his departure, the long-absent navigator returned home; but, before the tidings could be conveyed to Captain Back, he had landed at New York, and reached the northern lakes. Having, therefore, gone so far, he was instructed to proceed, and undertake the exploration of that small portion of the American coast which intervened between the farthest points reached by Ross on the one side and Franklin on the other. In this career he discovered a new river, the Thlew-ee-choh, on which he embarked, with the assurance that it would carry him down to the sea. After overcoming various hardships and difficulties, he succeeded in reaching its termination, and entered a large bay of the northern ocean. He traced the whole circuit of its shores, and even obtained views of the coast both to the east and west. He did not, however, reach Sir James Ross's pillar, and thus could not connect his own discoveries with those of his predecessor. There only appeared reason to believe, on comparing the two, that Boothia, instead of a very extensive peninsula, was in reality an island, separated by a channel from the body of America. On the whole, Captain Back's journey being performed by land or in boats, is foreign to our present

River Thlew-ee-choh.

subject, and belongs properly to the continent. Accordingly it has been narrated at some length in the volumes of the series which relate to British America.*

Expeditions of Dease and Simpson.

In 1837 and 1838, expeditions were undertaken, under the direction of the Hudson's Bay Company, by Messrs Dease and Simpson, by whom a good deal of farther information was collected. These journeys, however, were carried on similarly to that of Captain Back, and solely with the view of exploring the boundaries of the continental coast. The leading particulars therefore have been narrated in the work already referred to.†

* Vol. iii. chap. ii.
† Ibid. vol. iii. page 77. Appendix, pages 355, 372, &c.

CHAPTER IX.

Modern Voyages towards the North Pole.

Expedition of Captain Phipps (Lord Mulgrave); Progress arrested by the Ice; His Return—Scoresby; Various important Observations made by him; Voyage to the Eastern Coast of Greenland; Discoveries; Returns to England—Clavering's Voyage and Discoveries—Expedition of Graah—De Blosseville—Dutaillis—Buchan's Expedition—Parry's Fourth Expedition, in which he attempts to reach the Pole; Progress along the Coast of Spitzbergen; The Boats arrive at the Ice; Mode of Travelling; Various Obstacles encountered; Compelled to return—Question as to the Practicability of reaching the Pole.

CHAP. IX.

Pause in northern exploration.

Since the times of Hudson and Fotherby, comprehending a period of more than a century, the attempt to reach and to cross the North Pole had not been resumed. The extraordinary zeal, however, which in the early part of the reign of George III., and under the patronage of that excellent monarch, was kindled in the cause of naval discovery, failed not to extend in this direction. Mr. Daines Barrington, distinguished by the union of rank with scientific acquirements, espoused with ardour the belief that, in spite of every obstacle, the pole of the earth might be reached, and various facts thereby brought to light, which at present are hid in mystery. He read to the Royal Society several papers on this subject, which were afterwards reduced into a separate treatise; and that learned body, eagerly imbibing the opinions of their eminent associate, solicited the Board of Admiralty to fit out an expedition which might

Daines Barrington.

attempt to realize this interesting object. The Earl of Sandwich, then at the head of the naval department, entered with ardour into the society's views, and drew up the plan of an expedition, which he submitted to his majesty. The intentions of government having now transpired, Captain John Phipps, afterwards Lord Mulgrave, offered himself for the command, and was accepted. Two bomb-vessels, known under the rather odd names of the Racehorse and the Carcass, were selected, and stored with an ample provision of wine, spirits, and whatever else could contribute to the health and comfort of the crews; the latter of which was intrusted to Lieutenant Lutwidge, under whom Horatio Nelson, afterwards so celebrated in the naval annals of Britain, served as cockswain. Other equipments were added, not hitherto customary in nautical preparations. All previous attempts were made by mercantile bodies, who were content to combine geographical discovery with certain views of commercial advantage; whereas the expeditions projected under the auspices of George III. were the first which had the promotion of science for their sole object. Mr Israel Lyons, an eminent astronomical observer, was employed by the Board of Longitude to supply the ships with suitable instruments; to which were added two chronometers, made with the greatest care by Kendall and Arnold, for measuring the distance from the first meridian by difference of time. Mr Cumming constructed a seconds-pendulum, fitted to determine the range of vibration in high latitudes; while Sir Joseph Banks and M. d'Alembert drew up instructions suggesting various scientific objects, respecting which it was thought desirable that observations should be repeated. The vessels were also provided with Dr Irving's apparatus for distilling fresh water from the sea,—an invention which, being then recent, excited much interest.

Captain Phipps.

First scientific expedition

Thus equipped, the expedition began to move on the 21st May 1773; but being detained by contrary winds, did not leave the Nore till the 4th June. The last

Leaving the Nore.

CHAP. IX.

Sixty degrees of latitude.

object seen on land was Whitby Abbey; and Captain Phipps then steered into the mid-channel of the German Ocean, endeavouring to avoid both Norway and Shetland. In sixty degrees of latitude the sun set about twenty minutes past nine; the clouds making a beautiful appearance by the reflection of its rays when below the horizon. In latitude 66°, on the 19th June, that luminary, even at midnight, was still visible.

Deep soundings.

Captain Phipps here made deeper soundings than were ever before attempted; reaching with a very heavy lead not less than 780 fathoms. The temperature at that depth was 26° Fahrenheit, while in the air it was 48°. Trial was now made of Dr Irving's apparatus, which was considered completely successful; inasmuch as it was found to produce a sufficient quantity of perfectly good water, either for drinking or cooking, without any inconvenient expense of fuel. This favourable opinion has not been confirmed by experience; and the practice, owing, we believe, to the quantity of coal required, has never come into general use.

Spitzbergen.

On the 27th June the navigators found themselves in the latitude of the southern extremity of Spitzbergen, without any appearance either of ice or land; but two days after they saw the shore, and stood close in. This coast "appeared to be neither habitable nor accessible; for it was formed by high barren black rocks, without the least mark of vegetation; in many places bare and pointed; in other parts covered with snow, appearing even above the clouds: the valleys between the high cliffs were filled with snow and ice. The prospect would have suggested the idea of perpetual winter, had not the mildness of the weather, the smooth water, bright sunshine, and constant daylight, given a cheerfulness and novelty to the whole of this striking and romantic scene." In sailing along this bold and lofty coast, the mariners enjoyed gentle gales and measured the height of several of the mountains, one of which was found to be 4500 feet. On the following morning they learned, from the master of a Greenlandman, that there was ice

Height of the mountains.

sixteen leagues to the westward, and that one Dutch and two English ships had been lost in the course of the season.

Magdalena Hoek.

In the first days of July, Captain Phipps continued to steer along the shore; and on the 4th he came to Magdalena Hoek, near which he landed, and began to make observations upon the variation of the compass, which were soon interrupted by a thick fog. Being informed by the Rockingham, a vessel employed in the fishery, that the ice was ten leagues off Hakluyt's Headland, he determined to direct his course for that part of Spitzbergen. On the 5th, as he was avoiding certain islands near Danes Gat, something white was seen through the mist, and a noise was heard as of surf breaking upon the shore. The commander, desiring the Carcass to keep close to him, resolved to stand towards it and see what it was. Erelong, amid thick fog, the crews saw an object on their bow, partly black and partly covered with snow, which they at first mistook for land: it soon, however, proved to be the main body of the ice, on which wind and sea were beating with such violence that they could not have escaped, except by constant change of tack, and by the utmost alertness of officers and men.

Singular appearance of the ice.

Change of course.

Captain Phipps, finding himself now upon the great field, and being informed that it extended unbroken to the north-west, determined to move eastward,—a direction seldom taken by the whale-fishers,—where he hoped to find some opening to them unknown. Continuing to work his way against the wind, between the ice and the land, he passed first Hakluyt's Headland, then Vogel Sang, and on the 7th found himself approaching the bold pinnacle of Cloven Cliff,—a remarkable promontory, named from its resemblance to a cloven hoof, and which, from its perpendicular form, is never covered with snow. Here, as the frozen masses increased in number and size, the officers, after full deliberation, concluded it vain to attempt penetrating any farther in this direction; and they were farther

CHAP. IX

Repeated changes of course.

discouraged, by considering that this was nearly the place in which all previous navigators had been checked in their efforts to reach the Pole. The commander therefore came to the resolution of standing to the westward, cherishing some hopes of a passage in that course. He had a dreary run, immersed in fogs so thick that the ships, even when very near, could not see each other; and a number of the crew, notwithstanding an extra allowance of wine and spirits, became affected with rheumatic colds and pains in the bones. Having made ten degrees to the westward, without the least appearance of an opening, he determined again to try the east, in the hope that the continuance of warm weather might have dissolved the barriers which had formerly arrested his progress. On the 12th July the navigators were a second time in the vicinity of Cloven Cliff, and found a good harbour on the island to which it is attached by a narrow isthmus. Here they obtained abundance of water, and, though interrupted by fog, made some important celestial observations,—taking the bearings and altitudes of the principal objects on the coast. In endeavouring to push on, however, the captain was stopped at nearly the same point as before,—finding the ice locked in with the land, and no passage either to the east or north. In despair, he turned once more westward, and kept close to the main field, pushing into all its openings, some of which, being nearly two leagues long, afforded hopes of success; but they proved to be only ice-bays. Near Hakluyt's Headland the ships suffered a severe pressure between a loose fragment and the fixed mass. He now perceived that it would be extremely unsafe to proceed before an easterly breeze, which brought in all the loose pieces, and drove them against the great field, making it resemble a rocky shore; and it proved both easier and safer to sail against the wind. He resolved, in spite of repeated repulses, to try another effort to the eastward; and this time he was rewarded by some progress. Making way through

Cloven cliff.

Hakluyt's Headland.

the floating ice, he came to an open sea, stretching north-east, which inspired the most flattering hopes. The coast was neither so lofty nor exhibited the same monotonous aspect as the one he had just passed; the tints being more varied, and having more of the natural colour of earth, had caused the early navigators to give to different points the names of Red Beach, Red Hill, and Red Cliff. At length he reached Moffen, a low flat island, covered with numerous flocks of wild fowl. He continued two days longer to sail through an open sea, meeting only loose masses, till, on the 27th, he was stopped by the main body of the ice lying east and west. He then coasted it to the eastward, pushing the ship, by a press of canvass, into the icy bays or openings, notwithstanding the large pieces by which these were encumbered. On the 29th July the expedition reached another island, larger than Moffen, clothed with moss, and well supplied with deer; on the shore of which were found large fir-trees, some seventy feet long, partly torn up by the roots, partly cut down by the axe, and fashioned into different shapes, but all perfectly entire. Two of the officers engaged in an encounter with a walrus, from which they came off with little honour. The animal being alone, was wounded in the first instance; but, plunging into the deep, he obtained a reinforcement of his fellows, who made a united attack upon the boat, wrested an oar from one of the men, and had nearly overset her, when another boat from the Carcass, under the command of Nelson, came to her relief.

Moffen island.

Encounter with a walrus.

From the point which the discoverers had now reached, they saw that remote peninsula of Spitzbergen which the Dutch call North-east-land, and beyond it the range of the Seven Islands. The ice, however, began to gather round them, and Captain Lutwidge, on ascending to the top of a high hill, saw to the eastward one continued frozen surface, bounded only by the horizon. The ships were now becalmed amid a very beautiful and picturesque scene; the immense

Return of ice.

CHAP. IX

Alarm of the pilots.

field being covered with snow, except where some pools of water were coated with a newly formed crust. The mariners attempted in vain to make any progress; the ice closed fast, and no opening was any where seen, except for about a mile and a half round the vessels. The pilots, who had never before proceeded so far, were seriously alarmed lest they should be beset. Nor were their fears groundless; for next day the ships were frozen in faster than ever, not having room to turn, while the passage by which they entered had entirely closed up behind them. There was no longer any time for deliberation. They began sawing through deep ice,

Plan of escape by the boats.

some of which was twelve feet thick; and these laborious efforts only enabled them to move three hundred yards westward; while the mass by which they were invested was moving in the opposite direction, carrying them along with it. In these circumstances, Captain Phipps conceived no time was to be lost in putting out the boats and dragging them over the surface, with the view of reaching the Dutch fishermen who usually about this period were known to shape their course homewards. On the 7th August they had got forward two miles; and the commander, on his returning to the ships, finding the ice round them a little more open, caused all the sails to be set, by which means they were made to move, though but slowly, and still counteracted by the drift ice. However, being favoured by moist

Return to the open sea.

and foggy weather, their progress soon became more rapid. They came up with the boats, and took them on board; and on the 10th, having a brisk gale from the north-east, they forced their way through all obstacles, though not without sustaining many heavy strokes, and breaking the shank of their best bower anchor; but about noon they found themselves in the open sea.

Being thus delivered from their greatest fear, they repaired to the harbour of Smeerenberg for refreshment. In its vicinity they admired a very lofty iceberg, which presented a perpendicular face nearly 300 feet high, of

a fine light green, and down which a cascade was pouring. "The black mountains, white snow, and beautiful colour of the ice, made a very romantic and uncommon picture." A large fragment, which had fallen into the sea, floated out, and grounded in twenty-four fathoms: it stood fifty feet in height, and was of the same beautiful tint. Harbour of Smeerenberg.

Captain Phipps, before quitting the Polar world, made some general remarks on the phenomena which it presents. In all cases he observed a great swell near the edge of the ice; but, whenever he was enclosed among its loose fragments, the sea was perfectly smooth. According to Hudson, the green waters were free from ice, which was found only in the blue; but no facts appeared to confirm this distinction, nor does there probably exist any. Marten described the sun at midnight as resembling the moon in appearance; but our observers could see no difference in its aspect, except what arose from its being lower in the heavens. Polar phenomena.

On the 19th August, the captain weighed for England, and on the 24th was somewhat surprised by the sight of the planet Jupiter, no star having for a long time been visible amid the perpetual light of the northern sky. After passing Shetland on the 7th September, he sustained several very heavy gales, during which he lost three boats, and was obliged to throw two guns overboard. However, having reached Orfordness on the 24th, he proceeded without farther difficulty to the Nore. Sailing for England.

The result of this voyage, which was considered as having been made under favourable circumstances, tended in some degree to chill the hopes of penetrating more deeply into the Arctic regions. It seemed that, from the eightieth degree, ice in one unbroken field stretched to the Pole. The probability, however, of attaining the desired object by sailing northwards from the Pacific, between America and Asia, led to the equipment of Captain Cook for his third voyage. After that attempt had also failed, disappointment was followed as Results of the voyage.

CHAP. IX

Mr. Scoresby.

usual by a suspension of interest; and the northern realms sunk almost into an entire oblivion down to the recent period when the spirit of discovery was again revived. Public attention was first recalled to them by Mr Scoresby, who, bred a practical whale-fisher, had made observations with an intelligent and scientific eye, very unusual among those who pursue a calling so rough and dangerous.

Nearest approach to the Pole.

In 1806, this gentleman made the nearest approach to the Pole that had as yet been fully authenticated; for the statements of the Dutch and other navigators, who boast of having proceeded farther, are subject to great doubt as to their observations of latitude. At this time he was acting as mate to his father, who commanded a Greenland ship from Hull. Having left Jan Mayen and the Whale Bight, they pushed northwards, when they reached an open sea, so extensive that its termination could not be discovered, and it was believed to stretch four or five hundred square leagues. Arriving at length at a very close field, consisting of bay-ice compacted by drifting fragments, they had recourse to towing, boring, warping, and *mill-dolling*,—a process which consists in the use of a sort of battering-ram. Having thus opened a path across a very broad barrier, they came again to an open sea, which appeared nearly unbounded, having only the ice on the south and the land on the east. As their object was to catch whales, they chose a west-north-west direction. Swiftly crossing the short meridians of this parallel, they soon passed from the 10th degree of east to the 8th degree of west longitude; their latitude being 79° 35′, and the sea still open on every side. As fish, however, did not appear, they changed their tack, and ran east-north-east about 300 miles, till they came to the 19th degree of east longitude, where they found themselves in lat. 81° 30′, being a degree higher than Phipps had attained, and only about 500 geographical miles from the Pole. Had discovery been their object, a favourable opportunity was now offered; and neither master nor mate would

Passing an ice barrier.

have been insensible to the glory of acquiring enlarged knowledge of these boundaries of the earth. But they had been fitted out by a mercantile body to bring home a cargo of whale-oil, and this solid purpose could not be postponed for the most brilliant speculations of science. The sea to a great extent lay open before them; but, as it contained no whales, they steered their course backwards towards Hakluyt's Headland, and in its vicinity they caught twenty-four of these valuable animals, from which were extracted 216 tuns of oil.

Restraints on discovery.

Mr Scoresby indulged his curiosity by occasionally landing on islands, and clambering up the lofty steeps which usually rise from their shores. The Fair Foreland, at the north-west of Spitzbergen, was the first Arctic ground on which he touched; but the fog soon spread so thickly that he could remark little except the immense multitude of birds which clustered around the rocks and precipices. Afterwards, in 1818, he landed near Mitre Cape, and undertook to reach the summit of the singular cliff of which it consists. Much of the ascent was over fragments of rock, so loose that the foot in walking slid back every step, and the party could make no progress but by the very laborious operations of running and leaping. The continuance of frost appears to cause this extraordinary decomposition of the strata. At one place he found a ridge so steep and narrow that he could seat himself across it as on the back of a horse. He reached the top, estimated at 3000 feet above the level of the ocean, about midnight, when the sun still shone bright upon it, causing such a rapid dissolution of the snow, that streams of water were flowing on all sides. It is considered remarkable that in this frozen region, where even at a moderate elevation the mean annual temperature must be below the freezing-point, the highest summits should put off their winter-covering of snow, in which so many peaks, both of the temperate and of the torrid zones, are perpetually enveloped. It would appear, however, that during the

Observations.

Decomposition of strata.

CHAP. IX

Effects of solar heat.

short interval of continuous summer-day, the rays of the sun beating perpetually on the mountain-tops, which are raised above the fogs that brood over the sea, produce a degree of heat much greater than corresponds with the latitude. Hence the general average of the year, and especially the months which compose the long Arctic night, must be marked by a fearful depression of the caloric influence.

Polar scenery

The view from this mountain is described by Mr Scoresby as equally grand and beautiful. On the east side were two finely sheltered bays; while the sea, unruffled by a single breeze, formed an immense expanse to the west. The icebergs reared their fantastic forms almost on a level with the highest hills, whose cavities they filled, while the sun illumined but could not dissolve them. The valleys were enamelled with beds of snow and ice, one of which extended beyond reach of the eye; and in the interior, mountains rose beyond mountains, till they melted into distance. The cloudless canopy above, and the position of the party themselves, on the pinnacle of a rock surrounded by tremendous precipices, conspired to render their situation equally singular and sublime. If a fragment was detached, either by accident or design, it bounded from rock to rock, raising smoke at every blow, and setting numerous other pieces in motion, till, amid showers of stones, it reached the bottom. The descent of the party was more difficult and perilous than the ascent; the stones sinking beneath their steps, and rolling down, obliged them to walk abreast, otherwise the foremost might have been overwhelmed under the masses which those behind him dislodged. Finally, to the astonishment and alarm of the sailors below, the mate and his companions, at one place, slid down an almost perpendicular wall of ice, and arrived in safety at the ships. The beach was found nearly covered with the nests of terns, ducks, and other tenants of the Arctic air, in some of which there were young, over whom the parents

Perilous descent.

kept watch, and, by loud cries and vehement gestures, sought to defend them against the predatory tribes which hovered around.

Excursion to Jan Mayen's Land.

Mr Scoresby, also, in 1817, made an excursion on Jan Mayen's Land. The most striking feature was the stately Beerenberg, which rears its head 6870 feet above the sea; and being seen at the distance of thirty or forty leagues, proves a conspicuous landmark to the mariner. The first objects that attracted the eye were three magnificent icebergs, which rose to a very great height, stretching from the base of the mountain to the water's edge. Their usual greenish-gray colour, diversified by snow-white patches resembling foam, and with black points of rock jutting out from the surface, gave them exactly the appearance of immense cascades, which in falling had been fixed by the power of frost. A party ascended an eminence which constituted only the lower ridge of the hill, yet was itself 1500 feet high; and they were not long in discovering that the materials which composed it were entirely volcanic. They trode only upon ashes, slag, baked clay, and scoriæ; and whenever these substances rolled under their feet, the ground beneath made a sound like that of empty metallic vessels or vaulted caverns. On the summit they observed a spacious crater, about 600 feet deep and 700 yards in diameter, the bottom of which was filled with alluvial matter, and which, being encompassed by rugged walls of red clay half-baked, had the appearance of a spacious castle. A spring of water penetrated its side by a subterranean canal, and disappeared in the sand. No attempt was made to ascend the principal cone, which towered in awful grandeur, white with snow, above the region of the clouds; but at its feet was seen another crater surrounded by an immense accumulation of castellated lava. A large mass of iron was found, that had been smelted by the interior fires. The volcano was at this time entirely silent; but next year smoke was seen rising from it to a great height; and the same phenomenon had, in 1818, been

Volcanic formation.

CHAP. IX.

discerned by Captain Gilyott of the Richard, who even remarked a shining redness like the embers of a large fire.

Important discoveries.

The most important discoveries, however, effected by Mr Scoresby, took place in 1822, when he sailed in the ship Baffin, of 321 tons and 50 men, for the whale-fishery. In search of a better fishing-ground, he was led to the eastern coast of Greenland,—a tract absolutely unknown, unless at a few points which the Dutch had approached; and it formed a continuous line with the shore on which the colonies of Old Greenland, the subject of much controversy, were supposed to have been situated.

Refraction.

In approaching this interesting coast, he was amused by the singularly refractive power of the Polar atmosphere, when acting upon ice and other objects discerned through its medium. The rugged surface assumed the forms of castles, obelisks, and spires, which here and there were sometimes so linked together as to present the appearance of an extensive city. At other times it resembled a forest of naked trees; and Fancy scarcely required an effort to identify its varieties with the productions of human art,—colossal statues, porticos of rich and regular architecture,—even with the shapes of lions, bears, horses, and other animals. Ships were seen inverted, and suspended high in the air, and their hulls often so magnified as to resemble huge edifices. Objects really beneath the horizon were raised into view in a most extraordinary manner. It seems positively ascertained, that points on the Greenland shore, not above 3000 or 4000 feet high, were seen at the distance of 160 miles. The extensive evaporation of the melting ice, with the unequal condensation produced by streams of cold air, are considered as the chief sources of this extraordinary refraction.

Singular deceptive appearances.

It was on the 8th of June that, in 74° 6′ north latitude, the coast was discovered, extending from north to south about ninety miles, and of which the most northerly point was concluded to be that named on the charts

Gale Hamkes' Land, while the most southerly appeared to be Hudson's Hold-with-Hope. Mr Scoresby's ambition, however, to mount some of its crags, which no European foot had ever trodden, was defeated by an impassable barrier of ice; and a similar one having closed in behind him, he was obliged to sail back and forward several days through a narrow channel. During this interval he had a good opportunity of taking the bearings and directions of the principal objects on land. The latitude, as given in the maps, was tolerably correct, and was indeed his only guide in tracing the positions; for the longitude, after the most careful observation, was found to differ seven degrees from that in the best charts, and ten degrees from what is found in those usually supplied to the whale-fishers. The country was generally mountainous, rugged, and barren, bearing much resemblance to Spitzbergen, though less covered with snow. It could not be fully ascertained whether some low ground might not be interposed between the sea and the mountains; but their aspect, and the general analogy of the Arctic shores, suggested the idea that these mighty cliffs dipped perpendicularly into the waves.

Gale Hamkes' Land.

Mr Scoresby followed the usual system of naming the more prominent objects in the territory embraced by his discoveries. The two principal bays or inlets were designated Captain Kater and Sir Walter Scott; while two spacious forelands or projecting peninsulas, the former supposed to be an island, were assigned to Dr Wollaston and Sir Everard Home. Other bays and capes were bestowed upon Sir Thomas Brisbane, Dr Brinkley, Colonel Beaufoy, Dr Holland, Mr Herschel, and some of the author's personal friends. Afterwards, obtaining the view of some smaller bays to the south, he was enabled to pay a similar compliment to Sir George Mackenzie, Sir Charles Giesecke, Baron Humboldt, M. de la Place, and M. Freycinet.

Names of the new territory.

He now made a movement eastward in search of whales, of which he found no traces in the vicinity of

CHAP. IX.

land,—a change of purpose which was attended with a very distressing circumstance. William Carr, one of his most expert harpooners, and a fine active fellow, had struck a whale, which flew off with such rapidity that the line was jerked out of its place, and threatened the sinking of the boat. Having snatched the rope to replace it in the proper position, he was caught by a sudden turn, instantly dragged overboard, and plunged under water to rise no more. The boat having at once righted itself, the sailors looked round and asked, "Where is Carr?" One man only had seen him disappear, but so instantaneously, that he could not describe the manner of the accident.

Distressing accident.

A new coast.

On the 19th July the navigators came in view of a range of coast, of a very bold and peculiar character, extending about forty miles. It presented a mountain-chain from three to four thousand feet high, rising at once from the beach in precipitous cliffs, which terminated in numberless peaks, cones, and pyramids. In one instance there appeared to rise six or seven tall parallel chimneys; one of which, crowned with two vertical towers, was called Church Mount. The coast received the name of Liverpool; while to the mountains was given that of Roscoe. The range of shore terminated at Cape Hodgson; beyond which, however, steering south-west, they descried three other promontories; to these were successively given the appellation of Cape Lister, Cape Swainson, and Cape Tobin. Here Mr Scoresby took, for the first time, the opportunity of landing; when he found the beach much lower than that farther to the north, and consisting in a great measure of loose stony hills. After some examination, he came, near Cape Swainson, to an enclosure similar to those which the Esquimaux construct for their summer-huts, and within which were hollow structures like bee-hives, such as they use for stores. There were also some remains of fuel, charred drift-wood, half burnt moss and ashes; which last was considered as indicating the place that must have been occupied at no distant

Cape Swainson.

period. As a farther confirmation of this opinion, he likewise found instruments of wood and bone, one of them tipped with iron.

Jameson's Land.

Resuming his course at sea, and still holding south-westward, he now discovered a spacious inlet, to which, in looking upwards, no boundary could be seen. While penetrating this opening he observed another sound branching to the northward behind the Liverpool coast, and supposed to form it into an island. The opposite shore of this entrance was named Jameson's Land, from the eminent professor of natural history in Edinburgh Beyond Cape Hooker, the southern point of the coast just described, another large inlet stretched towards the north, to which was given the name of Captain Basil Hall. It had every appearance of converting Jameson's Land into an island; and the coast to the westward of it received the name of Milne's Land. Between Cape Leslie, constituting the northern point of that coast, and Cape Stevenson, on the opposite shore, the original opening continued to stretch into the interior, without any appearance of a termination. Combining this observation with the position of Jacob's Bight in the same latitude on the western coast, which Sir Charles Giesecke traced to the height of 150 miles, where it opened into a sort of inland sea, there appeared a strong presumption that, instead of the continuous mass of land which our maps represent, Greenland composes only an immense archipelago of islands. To this great inlet, the entrance of which was bounded by Cape Tobin on the north and Cape Brewster on the south, the navigator gave the name of his father, though posterity will probably be apt to associate with himself the name of "Scoresby's Sound."

Milne's Land.

Artic flora.

These coasts, especially that of Jameson's Land, were found richer in plants and verdure than any others seen on this occasion within the Arctic circle, and almost meriting the distinction of Greenland. The grass rose in one place to a foot in height, and there were meadows of several acres which appeared nearly equal to any in

CHAP. IX.

England. But nowhere could a human being be discovered; though there were every where traces of recent and even frequent inhabitation. At the foot of certain cliffs, named after Dr Neill, secretary to the Wernerian Society, were several hamlets of some extent. The huts appear to have been winter-abodes, not constructed of snow-slabs like the cells of the Esquimaux of Hudson's Bay, but resembling those of the Greenlanders, dug deep in the ground, entered by a long winding passage or funnel, and roofed with a wooden frame overlaid with moss and earth. The mansion had thus the appearance of a slight hillock. Near the hamlets were excavations in the earth, serving as graves, where implements of hunting, found along with the bones of the deceased, proved the prevalence here of the general belief of savage nations, that the employments of man in the future life will exactly resemble those of the present. There was one wooden coffin, which the navigator was willing to believe might mark a remnant of European colonization. Still it was thought singular that the dwellers on this coast should have been recently so numerous, and yet not one of them left; but it occurred that these were probably winter-quarters, and that during the summer the natives might have repaired into the interior in search of those land-animals which retreat to the southward in the more rigorous season.

Esquimaux huts.

Native graves.

On emerging from this large sound, and proceeding southward, Mr Scoresby discovered another continuous range of coast, where he observed a bay, which he named after Mr Wallace, and three capes after Messrs Russell, Pillans, and Graham, all eminent professors in the Scottish capital; also an island, which he dedicated to Captain Manby; another island and a cape, which he associated with the reputation of Dr Henry and Mr Dalton, two distinguished chemists at Manchester; and finally a third cape, which he assigned to Dr Barclay of Edinburgh.

New southern coast.

Disappointed as to any appearance of whales on this coast, he again steered to the northward, where icebergs

surrounded him, amounting at one place to the number of five hundred. This course brought him in a few days within sight of lands stretching still higher than those recently surveyed, and connecting them with the others which he had first discovered. There appeared two large territories, seemingly insular, to which were given the names of Canning and Traill; and between them was a most spacious inlet, honoured with the name of Sir Humphry Davy. On penetrating this opening, there arose several points of land, probably islands, presenting a range of mountains, which were made commemorative of Werner, the celebrated geologist; a smaller ridge was assigned to Dr Fleming; after which were appropriated Capes Biot, Buache, and Carnegie. He landed on Traill Island, and with incredible toil clambered to the top of a hill, where he hoped to have found a small plain containing a few specimens of Arctic vegetation; but this summit was steeper than the most narrowly pitched roof of a house, and, had not the opposite side been a little smoother, he would have found much difficulty in sliding down. Beyond this island, and separated from it by a considerable inlet named after Lord Mountnorris, was another coast; the pointed extremity of which received the name of Captain Parry. This promontory being at no great distance from Cape Freycinet, which had been seen in the first survey, there was thus completed the observation of a range of four hundred miles of coast, formerly known only by the most imperfect notices, and which might therefore be strictly considered as a new discovery.

Icebergs.

Traill Island.

Mr Scoresby afterwards approached more closely to Canning Island, and penetrated a sound between it and the main, connected apparently with Hurry's Inlet, and where he gave names to Capes Allan, Krusenstern, and Buch. He would have been happy to examine more of the Greenland coast, having on one occasion had a fair prospect of being able to run southward to Cape Farewell; but the ship was not his own, and his duty to his employers compelled him to turn in another direction.

Canning Island.

CHAP. IX.

Appearance of whales.

He had hitherto met with much disappointment; and, the season being far advanced, he was apprehensive of being obliged to return with a deficient cargo. But on the 15th of August numerous whales appeared round the ship: of these five were struck and three taken, which at once rendered the ship *full-fished*, and placed him among the most successful adventurers of the year. He could therefore return with satisfactory feelings; and the pleasure of the voyage homeward was only alloyed by the occurrence of a violent storm off Lewis, in which Sam Chambers, one of the most esteemed and active of his crew, was washed overboard.

Captain Clavering.

To these discoveries some additions were made next year by Captain Clavering, who was employed by the Admiralty to convey Captain Sabine to different stations in the Arctic Sea, for the purpose of making observations on the comparative length of the pendulum, as affected by the principle of attraction.

Arrival at Hammerfest.

Clavering sailed on the 3d May 1823, and on the 2d June arrived at Hammerfest, where he landed the philosopher with his tents and instruments. The observations being completed, he weighed anchor on the 23d, reached the northern coast of Spitzbergen, and fixed on a small island between Vogel Sang and Cloven Cliff for farther operations. While Captain Sabine was employed upon the island, he endeavoured to push into a more northern latitude; but, after great exertion, he could not reach beyond 80° 20′. Accompanied by the former, whom he had now rejoined, and whose observations were finished, he left this coast on the 22d July, and steered for the eastern shores of Greenland, of which he came in view on the 5th August. The scene appeared the most desolate he had ever beheld. The mountains rose to the height of several thousand feet, without a vestige of vegetation, or the appearance of any living creature on the earth or in the air. Even the dreary waste of Spitzbergen appeared a paradise to this. He landed his passenger and the scientific apparatus on two islands detached from the eastern shore of the continent, which he called the

Desolate scene.

Pendulum Islands, and of which the outermost point is marked by a bold headland rising to the height of 3000 feet.

Captain Sabine.

While Captain Sabine was employed in his peculiar researches, the other surveyed a part of the coast which lay to the northward, being the first which Mr Scoresby saw. It lay at some distance, with an icy barrier interposed; but was found indented with deep and spacious bays, suspected even to penetrate so far as to convert all this range of coast into a cluster of islands. The inlet, which the former navigator had assigned to Sir Walter Scott, was believed by Clavering to be that discovered by the Dutch mariner Gale Hamkes; but we have not ventured to remove this last from the more northerly position preferred by the scientific whaler. Other openings which occurred in proceeding towards the north were named by the captain, Foster's Bay, Ardincaple and Roseneath Inlets; and he saw bold and high land still stretching in this direction as far as the seventy-sixth degree of latitude.

Interview with the natives.

In regard to the natives this commander was more fortunate than his predecessor, who saw only their deserted habitations. On landing at a point on the southern coast of Sir Walter Scott's Inlet, he received intelligence of Esquimaux having been seen at the distance of a mile, and hastened thither with one of his officers. The natives on seeing them immediately ran to the top of some rocks; but the English advanced, made friendly signs, deposited a mirror and a pair of worsted mittens at the foot of the precipice, and then retired. The savages came down, took these articles, and carried them away to the place of their retreat; but they soon allowed the strangers to approach them, though their hands when shaken were found to tremble violently. By degrees confidence was established, and they conducted the visiters to their tent, five feet high and twelve in circumference, composed of wood and whalebone. Their aspect and conformation, their boats and implements, exactly corresponded to those observed by

Confidence established.

CHAP. IX.

Colour of skin.

Captains Parry and Lyon in Hudson's Bay. A child, after being diligently cleared of its thick coating of dirt and oil, was found to have a tawny, copper-coloured skin. The natives were astonished and alarmed beyond measure by the effect of fire-arms. A seal being shot, one of them was sent to fetch it. He examined it all over till he found the hole made by the ball, when, thrusting his finger into it, he set up a shout of astonishment, dancing and capering in the most extravagant manner. Another was prevailed upon to fire a pistol; but instantly, on hearing the report, started and ran back into the tent.

Return to the Thames.

The observations were not completed till the beginning of September, when the season was too late to allow Captain Clavering to gratify his wish of making a run to the northward. Nor did he extricate himself from the ice without some severe shocks; but, nevertheless, after spending six weeks at Drontheim, he entered the Thames about the middle of December.

Danish expedition.

We shall here, though deviating somewhat from a Polar direction, notice some recent attempts to complete the exploration of the eastern coast of Greenland. The Danish government, which holds the sovereignty over this vast extent of dreary shores, seems to have felt it unsuitable, while others were making important discoveries, that Denmark herself should remain inactive.

Captain, Graah.

In 1828, accordingly, they employed Captain Graah to proceed from the western settlements along the eastern side, as high as Cape Barclay, in latitude 69° 13′, with the particular view of tracing any indications of the early colonies believed to have been established there, but said to have been cut off from the civilized world by an accumulation of ice. This officer, accordingly, in the spring of 1829, set out with a party in an open boat from Nennortalik, where he had wintered, and succeeded in surveying the coast as far as the latitude of 65° 18′, when he was arrested by the frost. He observed, however, in 65° 30′ some islands, which he conceives were those of Danel. Having spent the winter of 1829-30 on the east coast, in latitude

63° 22′, in the spring of the latter year he again sailed northward, but was unable even to reach the point gained in the preceding summer. He considered that by his observations he had completely disproved the possibility of any civilized settlements, with towns or churches, having ever existed on this part of Greenland. Only a few scattered inhabitants, amounting in all to between 500 and 600, were met with in the course of his expedition. Their language and customs were similar to those of the Esquimaux; yet it is very remarkable that in size, shape, complexion, and in the form and expression of their countenance, they differ materially from that race, and bear much greater affinity to the Norwegians. Among the women and children, particularly, he observed many individuals having brown hair, while black is the universal colour among the other Greenlanders. In their intercourse they were found to be friendly, honest, and hospitable.*

Ancient colonies.

Unexplored coast.

First French expedition.

There still remained between the most northerly point reached by Captain Graah and Cape Barclay, the most southerly one observed by Scoresby, an unexplored coast of three degrees and a half, or about 240 miles in direct distance. The French government, ambitious to complete the survey of this Arctic territory, fitted out the Lilloise brig of war, and gave the command to M. de Blosseville, already known as an eminent navigator. He sailed from Dunkirk in the spring of 1833, and arrived in July on the eastern shores of Iceland. Proceeding thence he explored ten leagues of the seacoast of Greenland (between 68° 34′, and 68° 55′), which had never been described by any former discoverer. From some unexplained cause he returned to Iceland, though he wrote on the 5th of August from Vapnafiord, and again on the 16th, when on the eastern coast, that he was setting out to complete his undertaking, which he expected to effect in twenty days. The ice was already dense and impenetrable; but by steer-

* Journal of Geographical Society, vol. i. p. 247, &c.

CHAP. IX.

ing along its outer edge, as if it were land, he hoped without danger to accomplish his object. These, however, were the last accounts received from this distinguished seaman, whose fate is still involved in a painful mystery.

Second French expedition.

Next season the same government despatched M. Dutaillis, in La Bordelaise, to learn, if possible, what had become of his predecessor. He arrived at Vapnafiord on the 22d May 1834, but appears to have been misled by vague reports, which induced him to believe that De Blosseville had sailed, not towards the north, but to the western coast of Iceland. It was not therefore till the 5th August that he actually steered in the former direction, which was by much the more probable one; but the advanced season, with the tremendous sea, so alarmed him, that he determined to return. The authorities at Paris, however, considering, not without reason, that this search was very unsatisfactory, despatched, in April 1835, another vessel, named the Recherche, commanded by M. Trehouart. The king also, in conformity with a report made by Admiral Duperrey, offered a liberal reward to any one who should either aid in saving De Blosseville, or even bring satisfactory intelligence respecting the armament placed under his charge. The Recherche on the 7th May reached the coast of Iceland; but in July, off Greenland, the crew encountered such obstruction from ice, that they were forced to relinquish any farther search. M. Trehouart accordingly returned to the former place, whence, sailing on the 1st September, he arrived at Cherbourg on the 13th of the same month.*

Unsatisfactory results.

We have departed somewhat from the regular order of time, for the purpose of giving in a connected view the discoveries of Mr Scoresby and others along the coast of Greenland. Meantime, however, another at-

* United Service Journal, May 1835. Nautical Magazine, No. xli. p. 437; and xliv. p. 625.

Captain Buchan

tempt had been made to explore the depth of the Polar Sea. Combined with Captain Ross's expedition in search of the North-west Passage, the Dorothea and Trent were placed under the command of Captain Buchan, with the view of pushing direct to the Pole, and endeavouring, not only to reach that grand boundary, but to pass across it to India,—a voyage which, from the relative position of these two parts of the globe, would have been much shorter by this route than by any other. It was contended by the supporters of this undertaking, that the failures of Hudson, Fotherby, and Phipps, had occurred in consequence of their being entangled in the bays of Spitzbergen; that the production of ice takes place chiefly in the neighbourhood of land; and that, by keeping in the midst of the ocean, navigators would find an open sea.

Coast of Spitzbergen.

Captain Buchan, having set out early in the season of 1818, came on the 27th May in view of Cherie Island. Without pausing there, he stretched along the western coast of Spitzbergen to the eightieth degree of north latitude, where he encountered a severe storm, which separated his vessels for a time, and obliged them to seek shelter in Magdalena Bay. On the 10th June he met several Greenland ships, and was informed by the masters that, in the great sea to the westward, to which he had looked with the most sanguine hope, the ice was completely impenetrable. He determined, therefore, to turn Hakluyt's Headland, and proceed north-eastward in the track ultimately followed by Lord Mulgrave. On his way he was soon completely beset, being hemmed in by fields of ice ten or twelve miles in circumference, amid which icebergs rose in the rudest and most fantastic forms, appearing like specks in a boundless plain of alabaster. On the 26th June the navigators reached Fair Haven, situated between Vogel Sang and Cloven Cliff. Being detained here for some time, they found numerous herds of the walrus and the deer, and killed, after hard combats, several of the former,—one weighing a ton; while of the latter they despatched with

Fair Haven reached.

CHAP. IX

ease from forty-five to fifty, the average weight of which was 120 lbs. Being at length enabled to move forward, they reached the latitude of 80° 32′, where they were beset three weeks. On the 29th July, the Dorothea was again brought into open water; but on the 30th she was exposed to a tremendous gale, which blew her upon the main body of the ice with a force that she was unable to resist. In this awful situation, the crew having no time to deliberate, determined to turn the helm so that the wind might drive the ship's head into the ice, where it was possible they might find a secure lodgement even amid this fearful tempest. The rudder was accordingly placed in the manner directed, and a solemn awe impressed the mariners during the few moments which were to decide whether the Dorothea was to be safely moored, or to be dashed to pieces. She struck with a terrible shock, which was repeated frequently in the course of half an hour. By that time she had forced her way more than twice her own length into the body of the ice, where she remained immovably fixed. By and by the gale moderated, and she was again brought into an open sea; but she had been so shattered, and the water entered by such numerous leaks, that scarcely any effort could preserve her from sinking. Next morning, however, being fine, the crew with much difficulty worked her round to the harbour of Smeerenberg. There she was so far refitted as to be able in the beginning of September to take the sea, and on the 10th October came in view of the coast of England, near Flamborough Head.

Tremendous gale.

Return home.

No farther attempt was made to reach the Pole in *ships;* but, after a certain interval, a plan was devised to accomplish that object in vehicles drawn over the frozen surface of the ocean,—a scheme first suggested by Mr Scoresby. In a memoir read by this gentleman to the Wernerian Society, he endeavoured to prove that such a journey was neither so visionary nor so very perilous as it might appear to those who were unacquainted with the Arctic regions. The Polar Sea, he

New scheme of Mr. Scoresby.

doubted not, would in some meridians present one continued sheet of ice, the inequalities of which would oppose no insurmountable barrier. Intervals of open water would be more troublesome; yet the vehicle, being made capable of serving as a boat, might either sail across or make a circuit round them. This conveyance, he remarked, ought to be a sledge formed of those light materials used by the Esquimaux in the construction of their boats, and drawn either by rein-deer or dogs. The former animals are so fleet, that, in favourable circumstances, they might go and return in a fortnight, while the best dog-team would require five or six weeks; the latter, however, would be more tractable, and better fitted for skimming over thin or broken ice. Though the cold would be very severe, yet, as no alarming increase occurred between the seventieth and eightieth degrees of latitude, there was little ground to apprehend that in the remaining ten degrees it should become insupportable. For provisions were recommended portable soups, potted meats, and other substances, which, with little weight, contained much nourishment.

Proposed boat sledge.

Rein-deer team.

These suggestions did not for a considerable time attract attention; but at length Captain Parry, after his three brilliant voyages to the north-west, finding reason to suspect that his farther progress in that direction was hopeless, turned his thoughts to the probability of penetrating over the frozen sea to the Pole. Combining Mr Scoresby's ideas with his own observations, and with a series of reflections derived by Captain Franklin from his extensive experience, he submitted to the Lords of the Admiralty the plan of an expedition over the Polar ice. Their lordships, having referred this proposal to the council and committee of the Royal Society, and received a favourable report as to the advantages which science might derive from such a journey, applied themselves with their usual alacrity to supply the captain with every thing which could assist him in this bold undertaking. The

Captain Parry's plans.

New expedition proposed.

CHAP. IX.

Hecla dispatched.

Hecla was employed to carry him to the northern coast of Spitzbergen, where she was to be secured in a safe harbour or cove; and with her were sent two boats, to be dragged or navigated, according to circumstances, from that island to the Pole. These boats being framed of ash and hickory, covered with waterproof canvass, over which were successive planks of fir and oak, with a sheet of stout felt interposed, united the greatest possible degree of strength and elasticity. The interior was made capacious and flat floored, somewhat as in troop-boats, and a runner attached to each side of the keel fitted them to be drawn along the ice like a sledge. Wheels were also taken on board, in case their use should be found practicable.

Departure of the expedition.

The adventurers started on the 27th March 1827, and were towed down the river by the Comet steamboat. On the 4th April they weighed anchor from the Nore, and on the 19th entered the fine harbour of Hammerfest in Norway, where they remained two or three weeks, and took on board eight rein-deer, with a quantity of picked moss for their provender. Departing on the 11th May, they soon found themselves among the ice, and met a number of whale-ships. On the 13th they were in view of Hakluyt's Headland, when the captain endeavoured to push his way to the north-east in the track of Phipps. The vessel, however, was soon completely beset, and even enclosed in a large floe, which carried her slowly along with it. As every day was now an irretrievable loss, Captain Parry became impatient in the extreme, and formed a plan to push off northward, leaving the ship to find a harbour for herself, where he trusted on his return to trace her out. But the survey of the route in the proposed direction was most discouraging. In consequence of some violent agitation the preceding season, the ice had been piled up in innumerable hummocks, causing the sea to resemble a stone-mason's yard, except that it contained masses ten times larger. This state of the surface, which would have rendered it impossible to drag the boats more than

Difficulties encountered.

a mile in the day, was found to prevail for a considerable space with little interruption. The current meantime continued to carry the ship, with the floe to which she was fastened, slowly to the eastward, till it brought her into shoal water. Captain Parry lowered a boat, and found some heavy masses of ice attached to the bottom in six fathoms; after which he felt it quite out of the question to leave her with a diminished crew, and exposed to so much danger, arising from the combined difficulty of unsurveyed ground and ice. The conclusion was therefore irresistibly forced upon his mind, that a secure harbour must be sought for the vessel before setting out with the boats. No choice was then left but to steer back for the coast of Spitzbergen, where he unexpectedly lighted on a very convenient recess, named by him Hecla Cove; and it proved to be part of the bay to which an old Dutch chart gives the name of Treurenberg. It was now the 20th of June, and the best of the season had been spent in beating backwards and forwards on these ice-bound shores; he therefore resolved, without farther delay, to prosecute the main object of his enterprise, and though scarcely hoping to reach the Pole, he determined at all events to push as far north as possible. He took with him seventy-one days' provision, consisting of pemmican (beef dried and pounded), biscuit, cocoa, and rum. The spirit of wine, as the most portable and concentrated fuel, was alone used for that purpose. There were provided changes of warm clothing, thick fur-dresses for sleeping in, and strong Esquimaux boots. The rein-deer and also the wheels were given up at once as altogether useless in the present rugged state of the ice; but four sledges, constructed out of the native snow-shoes, proved very convenient for dragging along the baggage.

Necessity of finding a secure harbour.

Hecla Cove

Land journey

On the 22d June the expeditionary party quitted the ship, and betook themselves to the boats amid the cheers of their associates. Although all the shores were still

CHAP. IX.

Soft ice.

frozen, they had an open sea, calm and smooth as a mirror, through which, with their loaded vessels, they advanced slowly but agreeably. After proceeding thus for about eighty miles, they reached, not, as they had hoped, the main body of the ice, but a surface intermediate between ice and water. This could neither be walked nor sailed over, but was to be passed by the two methods alternately; and it was on such a strange and perilous plain that it behoved them to land, in order to commence their laborious journey towards the Pole.

Singular mode of travelling.

Captain Parry describes in an interesting manner the singular mode of travelling which they were compelled to adopt. The first step was to convert night into day; to begin their journey in the evening and end it in the morning. Thus, while they had quite enough of light, they avoided the snow-glare and the blindness which it usually produces; besides, the ice was drier and harder beneath them; and they enjoyed the greatest warmth, when it was most wanted, during the period of sleep, though they were a little annoyed by dense and frequent fogs. Thus their notions of night and day became inverted. They rose in what they called the morning, but which was really late in the evening, and, having performed their devotions, breakfasted on warm cocoa and biscuit; then drawing on their boots, usually either wet or hard frozen, which, though perfectly dried, would have been equally soaked in fifteen minutes, the party travelled five or six hours, and a little after midnight stopped to dine. They next accomplished an equal journey in what was called the afternoon; and in the evening, that is, at an advanced hour in the morning, halted as for the night. After applying themselves to obtain rest and comfort, they put on dry stockings and fur boots, cooked something warm for supper, smoked their pipes, told over their exploits, and forgetting the toils of the day, enjoyed an interval of ease and gayety. Then well wrapped in their fur cloaks, they lay down in the boat, rather too close together perhaps, but with

Night and day.

very tolerable comfort; and, in due time, the sound of a bugle roused them to their breakfast of cocoa, and to a repetition of the same arduous duties.

Slow and laborious progress.

The progress for several days was most slow and laborious. The floes were small, exceedingly rough, and intersected by lanes of water, which could not be crossed without unloading the boats. It was commonly necessary to convey these and the stores by two stages, and the sailors, being obliged to return for the second portion, had to go three times over the same ground; sometimes they were obliged to make three stages, and thus to pass over it five times. There fell as much rain as they had experienced during the whole course of seven years in a lower latitude. A great deal of the ice over which they travelled was formed into numberless irregular needle-like crystals, standing upwards, and pointed at both ends. The horizontal surface of this part had sometimes the appearance of greenish velvet, while the vertical sections, when in a compact state resembled the most beautiful satin-spar, and asbestos when going to pieces. These peculiar wedges, it was supposed, were produced by the drops of rain piercing through the superficial ice. The needles at first afforded tolerably firm footing; but, becoming always more loose and moveable as the summer advanced, they at last cut the boots and feet as if they had been penknives. Occasionally, too, there arose hummocks so elevated and rugged that the boats could only be borne over them, in a direction almost perpendicular, by those vigorous operations called "a standing pull and a bowline haul." The result of all this was, that a severe exertion of five or six hours did not usually produce a progress of above a mile and a half or two miles, and that in a winding direction; so that, after having entered upon the ice on the 24th June, in latitude 81 degrees 13 minutes, they found themselves on the 29th only in 81 degrees 23 minutes, having thus made only about eight miles of direct *northing*. Captain Parry soon relinquished all hope of reaching the Pole; however, it was resolved to

Rain.

Severe exertion required.

CHAP. IX.

Smoother ice.

push on as far as possible, and the party coming at length to somewhat smoother ice and larger floes, made rather better progress. While the boats were landing on one of these, the commander and Lieutenant Ross usually pushed on to the other end to ascertain the best course. On reaching the extremity, they commonly mounted the largest hummock, whence they beheld a sight of which nothing could exceed the dreariness. The eye rested solely upon ice, and a sky hid in dense and dismal fogs. Amid this scene of inanimate desolation, the view of a passing bird, or of ice in any peculiar shape, excited an intense interest, which they smiled to recollect; but they were principally cheered by viewing the two boats in the distance, the moving figures of the men winding with their sledges among the hummocks, and by hearing the sound of human voices, which broke the silence of this frozen wilderness. The rain, and the

Increasing impediments.

increasing warmth of the season, indeed, gradually softened the ice and snow, but this only caused the travellers to sink deeper at every step. At one place they sunk repeatedly three feet, and required three hours to make a hundred yards. As they halted on the evening of the 5th July, the margin of the floe broke, and a bag of cocoa fell into the sea, but luckily alighted on a tongue of ice and was taken up.* At the same time pools and even lakes were formed on the frozen surface; and though the peculiar blue of these superglacial lakes formed one of the most beautiful tints in nature, this was a poor compensation for being obliged to make a great circuit in order to avoid them. Still, amid all these difficulties, the floes became on the whole larger, the lanes of water longer, and the day's journey was gradually extended. Having attained 82

* It may be mentioned, that the contents of the package here alluded to were found to be quite uninjured after this rude immersion,—a protection ascribed to "Mackintosh's waterproof canvass,"—a manufacture which, as a security for sea stores, is mentioned by Captain Parry in terms of the highest commendation.

degrees 40 minutes, they began to hold it as a fixed point, that their efforts would be crowned with success so far as to reach the eighty-third parallel. This hope seemed converted into certainty, when, on the 22d, they had travelled seventeen miles, the greater proportion of which was directly north. But there now occurred an unfavourable change, which baffled all their exertions. Down to the 19th the wind had blown steadily from the south, which, though without aiding them much, had at least checked the usual movement of the ice in that direction. On the last of these days, however, a breeze sprung up from the north, which opened, indeed a few lanes of water; but this, it was feared, could not compensate for the degree in which it must cause the loosened masses of ice, with the travellers upon them, to drift to the southward. This effect was soon found to take place to an extent still more alarming than had been at first anticipated; for, instead of ten or twelve miles, which they reckoned themselves to have achieved northward on the 22d, they were found not to have made quite four. This most discouraging fact was at first concealed from the sailors, who only remarked, that they were very long of getting to the 83d degree. The expedition was now fast approaching the utmost limits of animal life. During their long journey of the 22d they only saw two seals, a fish, and a bird. On the 24th only one solitary *rotge* was heard; and it might be presumed that, from thence to the Pole, all would be a uniform scene of silence and solitude. The adventurers pushed on without hesitation beyond the realms of life; but now, after three days of bad travelling, when their reckoning gave them ten or eleven miles of progress, observation showed them to be four miles south of the position which they occupied on the evening of the 22d; the drifting of the snow-fields having in that time carried them fourteen miles backward This was too much; and to reach even the eighty-third degree, though only twenty miles distant, was now beyond all reasonable hope. To ask the men to undergo

Unfavourable change

Retrogression.

Abandonment of anticipated process.

CHAP. IX.

Determination to return.

such unparalleled toil and hardship, with the danger of their means being exhausted, while an invisible power undid what their most strenuous labours accomplished, was contrary to the views of their considerate commander. In short, he determined that they should take a day of rest, and then set out on their return. This resolution was communicated to the crew, who, though deeply disappointed at having achieved so little, acquiesced in the necessity, and consoled themselves with the idea of having gone farther north than any previous expedition of which there was a well authenticated record.

Laborious return.

The return was equally laborious as the going out, and in some respects more unpleasant from the increasing softness of the ice and snow,—depriving them of confidence in any spot on which they placed their boats or persons, and often sinking two or three feet in an instant. However, the drift southward made no longer any deduction from their progress, but added to it, every observation giving them several miles beyond their reckoning. There was more open water, and it was a relief to them that the sun in their nightly journeying was lower in the horizon; while, being to the northward, he did not, as formerly, glare in their faces. They met several bears,

Bear killed.

and killed one, which was eagerly devoured by the hungry crew; but the meal was followed by such symptoms of indigestion as inspired an unfavourable opinion regarding the flesh of this animal, though Captain Parry attributed the bad effects to the enormous quantity eaten. At length, on the 11th August, they heard the sound of the surge breaking against the exterior margin of the great icy field. They were soon launched on the open sea, and reached Table Island, where a supply of bread had been deposited; but Bruin had discovered it, and devoured the whole. They found, however, some accommodations; while the stores left at Walden Island were still quite undisturbed. On the 21st the navigators arrived in Hecla Cove, from whence, soon afterwards, they sailed for England.

Such was the result of the first attempt to penetrate to the Pole over the frozen surface of the deep. All the energy and hardihood of British seamen were exerted to the utmost, without making even an approach towards the fulfilment of their intention. A failure so complete has suspended for the present every idea of resuming the project; yet there seems nothing in the details just given to deter from the enterprise as impossible, or even to render it very unfeasible. The unfavourable issue seems evidently owing to the advanced season of the year, when the thaw and consequent dissolution of the ice had made great progress, and all the materials of the great northern floor were broken up. The water, in its progressive conversion from solid into fluid, presented only a treacherous quicksand, in which the travellers sunk at every step, not without the risk of being finally swallowed up. The ice, in these intermediate stages of its transition from hard to soft, and in the breaches and pressures to which this gave rise, assumed much more rugged forms than when it was spread and fast bound over the surface of the ocean. Its tendency also, when loosened, to float to the southward, inevitably defeats every attempt to proceed over it in a contrary direction; for which reason we concur in Mr Scoresby's opinion, that a departure much earlier in the season would be quite indispensable to give any chance of success. We would even go farther than that navigator, and advise the adventurers to start at the dawn of the Polar day, when there would be a probable chance of returning by the end of June. The great plain of ice would be much smoother and firmer at that than at any other season. It would be deeply covered with snow, which would fill various interstices, convert rugged steeps into sloping ridges, and produce a surface generally more level and uniform. This coating, too, would then be much harder, perhaps sufficient to sustain the weight both of the men and boats, and afford every where sure and solid footing, and wheels, it is probable, might be employed with advantage, though wholly unfit for that rugged and sinking

Result of disappointment.

States of the ice.

Chances of success.

CHAP. IX.

surface over which Captain Parry was obliged to tread. We are even inclined to ask, whether other machinery might not be beneficially introduced? Could there not be constructed a light portable bridge, to be thrown across chasms and from hummock to hummock, over which the keel of the boats by due adaptation might slide as on a railway, and the evils of friction be avoided?—The cold, doubtless, would be most intense; but Captain Parry's experience and management during his four winterings seem to have removed every apprehension that it would prove fatal. The boats might be hermetically closed, with winding entrances, like the winter-huts of the Esquimaux; and it was clearly established that, even in the darkest depths of the Polar winter, provided tempest did not fill the sky, it was possible, and even most salutary, to perform brisk movements in the open air. The travellers would indeed require an addition to their spirituous fuel, not a weighty article; also a larger stock of clothes; but these last it would be every way expedient to wear on their persons. The only circumstance which seems seriously alarming, is an observation made by Captain Parry, that the daily allowance of provision, amounting to ten ounces of biscuit and nine of pemmican, was not found sufficient to maintain the men in full vigour; and truly, when contrasted with their severe toils, it does appear an inadequate supply. It were dreadful indeed to think of sending a party to the Pole on short allowance. The quantity could not well be increased without making the drag too severe; but we cannot help thinking that the victuals selected fulfilled very imperfectly the obvious condition of being such as to comprise the greatest possible nutriment in the least possible bulk. Thus it seems unaccountable that the greater part of the food should have been farinaceous, in the form of dry biscuit, which contains surely much less nourishment than the same weight of animal food. We pretend not to be at all versant in the mysteries of cookery; yet portable soup, for instance, might certainly have been so prepared as to embody a much

Plans suggested.

Great provisions required.

Quantity of provisions.

greater amount of nutritive substance than mere dried and pounded beef; and, if duly seasoned, might have formed a most comfortable mess under the snows of the Pole. The addition of some rich cakes, cheese, and butter, might seem likely to compose a store which, without exceeding in weight that of Captain Parry, would yield a much larger proportion of nourishment and strength.—We should hesitate to recommend Mr Scoresby's plan of being drawn to the Pole by rein-deer, or even of trusting to a team of any description. These animals would be liable to many casualties, and, should they break down at an advanced period of the route, the result might be disastrous in the extreme.

Nutritive food.

This project would require, of course, that the ship should winter on the northern coast of Spitzbergen,—an arrangement, we conceive, indispensable to avoid that delay which had such an influence in frustrating the late expedition. We are surprised to find that even Captain Parry, after so many successful winterings, considers this as a serious objection. In fact, on seeing it admitted, that before the close of autumn a ship might penetrate to 82°, and perhaps to 83°, we are tempted to ask whether a discovery-vessel might not, in the first season, push forward to that latitude, and select a station either in an island, if such should be found, or if not, whether it might not enclose itself within one of the great fields of ice, and there await the arrival of spring! A very considerable and probably the roughest portion of the Polar route would thus be avoided.

Arrangements required

CHAPTER X.

Expeditions to the Seas around Boothia.

Equipment of the Terror; Dangers in Hudson's Strait; Besetment in the Ice near Frozen Strait; Series of Dreadful Perils off Southampton Island; Disablement and Return of the Ship—Boat Voyage of Messrs. Dease and Simpson; Labyrinth Bay; Open Inlet from the Polar Sea to Back's Estuary; South Coasts of Boothia and Victoria Land; Re-entrance into the Copper-mine River—Expedition of Mr. Rae; Wintering at Repulse Bay; Exploration of the Gulf of Akkolee to Lord Mayor's Bay and to the vicinity of the Fury and Hecla Strait.

CHAP. X.

In the year 1836, an expedition was equipped by the British government, at the recommendation of the Royal Geographical Society, to complete the discovery of the coast-line between Regent's Inlet and Point Turnagain. His majesty's ship Terror was set apart for the service.

Equipment of the Terror.

She had recently been strengthened in every possible manner for encountering the perils of the Polar Seas; and she was now provided with every desirable appliance which the experience of former expeditions could suggest. Two chief novelties in the fitting out were a complicated warming apparatus, which looked beautiful in theory but did not work well in practice, and three sledges with iron runners, so contrived as to be readily convertible into wheeled carriages. Captain Back, who had just returned from the exploits of his great land journey, was appointed to the command; and a ship's company of sixty men, nearly all volunteers, felt happy and proud to be placed under his authority.

Captain Back appointed to the command.

CHAP. X.

His instructions.

The instructions given to Captain Back were to proceed to the head of Hudson's Strait,—to go either to Repulse Bay or Wager River, either directly through the Frozen Strait or circuitously by Roe's Welcome,—to put the ship in a position of safety, and leave her in charge of an officer, and to go by land, with a large body of the crew, to examine the eastern shore of Prince Regent's Inlet, sending one detachment northward to the Fury and Hecla Strait, and another westward to Point Turnagain. The official document took a large view of probable contingences, but on the whole expressed a full belief that the prescribed service might be duly performed in one season, and that "this Arctic expedition might be distinguished from all others by the promptitude of its execution, and by escaping from the gloomy and unprofitable waste of eight months detention;" and it therefore gave distinct orders that every effort should be made to return to England in the fall of the current year.

Departure of the Terror.

The Terror left Chatham on the 14th of June, 1836, and was towed to the north of Scotland by the Rhadamanthus steam vessel. She soon was buffeted for three days by a strong gale; but notwithstanding her depth and massiveness, she pitched with remarkable ease, and scarcely strained a rope-yarn. On the 29th of July, when a good way across the mouth of Davis' Straits, she came first in view of the ice. The quantity of it was great; and one enormous berg presented a vertical face of not less than 300 feet in height. Occasional clear and pleasant runs were afterwards made, but, in general, the obstructions were incessant and tremendous. And so early as from the 1st to the 3rd of August, when the ship was near the vexed and foggy shores of Resolution Island, she had to bore and manœuvre her way among dense floes, high packs, and surging whirlpools.

Off the Savage Islands, two large parties of the Saddle-back Esquimaux came on board, and gave disgust-

CHAP. X.

Saddle-back Esquimaux.

ing confirmation to the truth of the stories which previous voyagers had told respecting their thievishness and brutality. "The women in particular," says Captain Back, "were more outrageous than I had ever observed before; for besides disposing of their garments, which they never hesitated to do, more than one actually offered to barter their children for a few needles." Some committed theft in spite of the utmost vigilance of the crew to prevent it; and a young woman, on observing that one of the officers had not much hair on his head, offered to supply him with her own at the price of a curtain-ring.

On the 8th of August the ship was moored to a large iceberg for protection from a gale. But the berg looked dangerous, and was anxiously watched by the officers lest it should capsize and overwhelm them. Early next morning, it was violently struck on the weather-side, by a heavy drifting floe; and for some minutes, it rocked and oscillated in awful menace of an overturn. But a large piece fell with a splash into the sea from one of its corners, and providentially restored the equilibrium.

The Terror steers for the Frozen Strait.

On the 14th of August, the Terror entered the narrows between Salisbury Island and the north coast; and a resolution was now taken to steer for the Frozen Strait. The course for four days continued to be severe, yet afforded considerable promise. But on the 18th, after the ship had worked for some time in only one hole of water, she was arrested by a dense unbroken pack, of fearful extent, and most wildly rugged surface. The ablest of the crew, who had spent all their manly years in the Greenland fishery, declared that they had never seen such heavy ice. Yet the ship pushed boldly into it: and very soon, to the surprise and joy of all, the stupendous mass went asunder, and disclosed a path through what seemed an impenetrable barrier. "Such," remarks Captain Back, "are the strange incidents of polar navigation, which, though less striking than the

wild commotions of the earthquake and tornado, are at all events calculated to excite equal gratitude to that merciful Providence whose protecting care is over all his works, in the icy waste no less than in the thronged city."

In sight of Baffin Island

On the 23rd of August, they sighted Baffin Island, which flanks the north side of the entrance of the Frozen Strait. But they found not a channel or a water-lane, even of the width of a brook, to invite them on toward a fulfilment of their hopes. The scene everywhere around them was a tumulated sea of ice, without one break, without one cheering feature, and with a surface so rough, and heaved, and peaked, that no human being could have travelled on it for more than a very brief distance. They all but abandoned expectation of ever getting into the Frozen Strait; and were now glad to attempt to work their way toward Southampton Island. They warped and bored, and spent many an hour in feverish excitement. On the 25th they made some little distance through a slack; but at sunset, they were stopped near an extensive floe, where, from the effects of pressure, some ponderous masses, not unlike the blocks of a Titanian ruin, had been heaped up to the height of thirty feet. "The land, blue from distance, and beautifully soft as contrasted with the white cold glare of the interminable ice around, reflecting by the setting sun the tints of the intervening masses thrown into the most picturesque groups and forms, spires, turrets, and pyramids, many in deep shade, presented altogether a scene sufficient for a time to cheat the imagination and withdraw the mind from the cheerless reality of their situation."

Attempt to reach South ampton Island.

Cutting through the ice.

On the 5th of September, when they were firmly fixed about sixteen miles from Southampton Island, and saw some tempting lanes of water at no great distance, they fell to the spirited task of cutting a way through the ice by mechanical force. All the ship's company, officers and men, seized axes, ice-chisels, handpikes, and

CHAP. X.

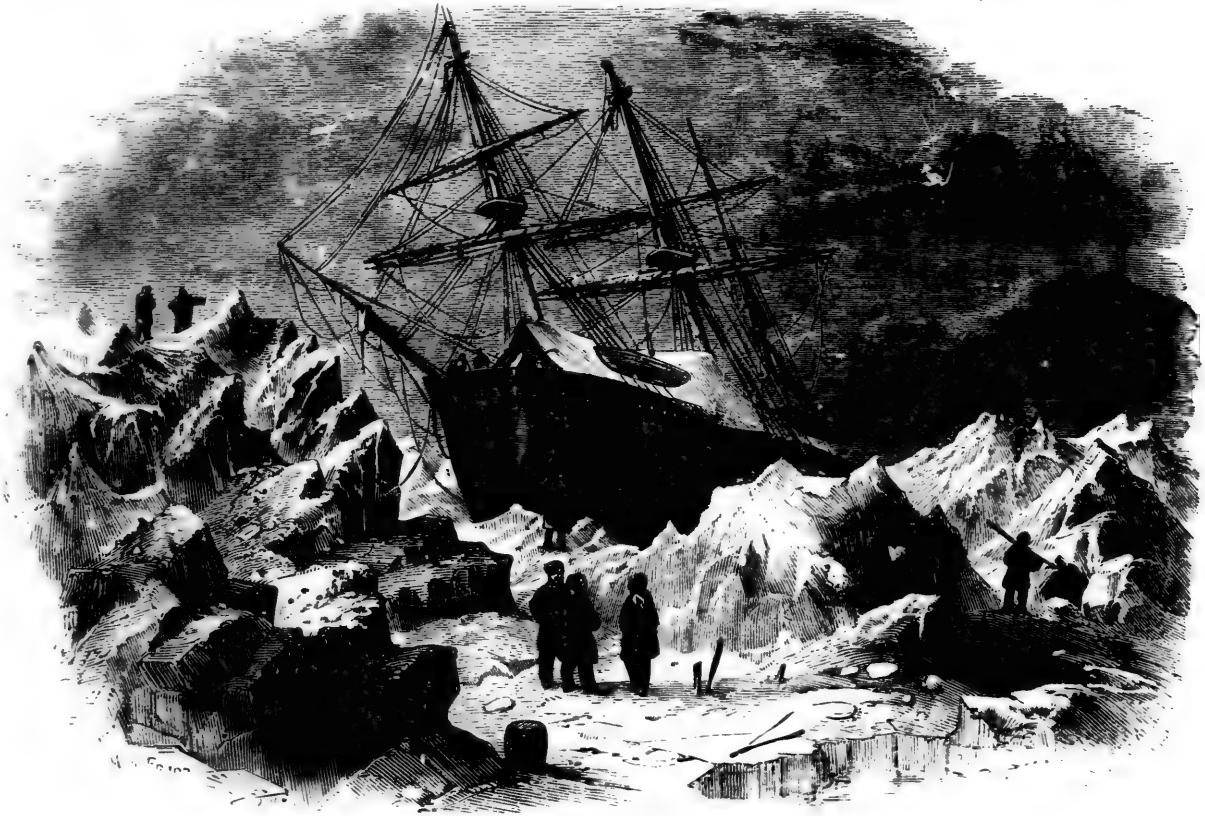
Good humour of the crew.

long poles, and vied with one another in driving the blocks asunder, and in dragging them away to the nearest pool. "In this service, they were frequently obliged to fasten lines to the heavier masses, and haul them out; and though slipping and turning about, yet the light-hearted fellows pulled in unison to a cheerful song, and laughed and joked with the unreflecting merriment of schoolboys. Every now and then some luckless wight broke through the thin ice, and plunged up to his neck; another endeavouring to remove a piece of ice, by pushing against a large mass, would set himself adrift with it; and every such adventure was followed by shouts of laughter and vociferous mirth." They succeeded in setting the ship free, and got her into a run of several miles toward the land; but so early as next morning, they were once more "in a fix." High winds and foul weather at the same time came on, and seriously bewildered them; yet, on the whole, did them good service by driving them slowly toward the shore.

Extreme danger off Cape Comfort.

On the 14th of September, within about four miles of Cape Comfort, the ship became severely "nipped." A violent, agitative, landward motion pressed all the surrounding ice into the utmost possible compactness, raised much of it into ponderous pointed heaps of twenty feet and upwards in height, and jammed the ship with perilous tightness between the nearest masses. Not a pool of water was now to be seen; not a foot of shelter marred the terrors of the blast; and the hardy adventurers could look only to the interposition of Providence for deliverance and protection. "None but those who have experienced it," said their brave leader, "can judge of the weariness of heart, the blank of feeling, the feverish sickliness of taste which get the better of the whole man under circumstances such as these."

The hapless ship was, for many days, drifted backward and forward, along the coast and away from it, over a range of about thirty miles, just as the wind or



THE TERROR NIPT BY THE ICE.

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the current or the tide directed. The black frowning cliffs of Cape Comfort might have seemed to the most excitable imagination to grin upon her in irony. She lay in the grip of the ice-masses as helplessly as a kid lies in the folds of a boa-constrictor; and once, when she escaped from that grip, or was hurtled into a change of position, she left her form as perfectly impressed behind her as if it had been struck in a die. The many old Greenland seaman on board all declared that they had never before seen a ship which could have resisted such a pressure. The perils, too, were increasing; and at length, on the 24th of September, the officers unanimously expressed a conviction, founded on the experience of the preceding thirty-four days, that all hope of making further progress that season towards Repulse Bay was gone.

CHAP. X.

All hope of further progress that season gone.

Captain Back now resolved to cut a dock in the only adjacent floe which seemed sufficiently large and low to afford the ship fair protection [illegible] day, by one of those extraordinary [illegible] are the last hope of the ice-bound Arctic voyager, the whole body of ice for leagues around got into general commotion, and burst into single masses; and commencing an impetuous rush to the west, tossed many blocks into heaps, ground others to powder, whirled all into a hurly burly, and bore away the ship like a feather toward the Frozen Strait. Nothing could be done by the crew but to await the issue; and when the storm subsided they found themselves midway between Cape Comfort and the entrance of the Frozen Strait, about three miles from the shore, without any prospect of either forcing their way into a harbour or finding some little shelter in a floe. They were once more firmly beset, with the additional calamity of being so much tilted up that the stern of the ship lay seven and a half feet above the horizontal, and the bow was jammed downward on the masses ahead. "Thus," says Captain Back, "ended a month of vexation, disappoint-

A storm drives the ship toward the Frozen Strait.

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All hope of further progress abandoned.

Captain Back now resolved to cut a dock in the only adjacent floe which seemed sufficiently large and high to afford the ship fair protection. But on the very next day, by one of those extraordinary convulsions which are the last hope of the ice-bound Arctic voyager, the whole body of ice for leagues around got into general commotion, and burst into single masses; and commencing an impetuous rush to the west, tossed many blocks into heaps, ground others to powder, whirled all into a hurly burly, and bore away the ship like a feather toward the Frozen Strait. Nothing could be done by the crew but to await the issue; and when the storm subsided they found themselves midway between Cape Comfort and the entrance of the Frozen Strait, about three miles from the shore, without any prospect of either forcing their way into a harbour or finding some little shelter in a floe. They were once more firmly beset, with the additional calamity of being so much tilted up that the stern of the ship lay seven and a half feet above the horizontal, and the bow was jammed downward on the masses ahead. "Thus," says Captain Back, "ended a month of vexation, disappoint-

A storm drives the ship toward the Frozen Strait.

CHAP. X.

ment, and anxiety, to me personally more distressing and intolerable than the worst pressure of the worst evils which had befallen me in any other expedition."

In October, the ship gradually righted, and then was carried through a series of vicissitudes not much dissimilar to her bygone disasters. On the 1st of November, the warming apparatus was specially needed, and put vigorously into requisition, but wofully failed. On the 7th a party walked to the land, and surveyed a harbour one mile and a half long, and half a mile broad, to which they gave the name of Smyth Harbour. The ship had now lain so long at rest on her ice-cradle, that hopes were entertained of uninterrupted quietness till the end of the season; but from the 8th till the 19th, she was again whirled hither and thither by the fury of storms and currents; and on one occasion, she was borne within 3,650 yards of the inaccessible cliffs of Cape Comfort, and seemed in no small peril of being unmoved from her icy bed, and crushed to a jelly against the rocks. But she remained firm on the floe, merely overhung and menaced for days by the tumults of the shore ice. This was thrown up on the shelving cliffs, in some places to the height of thirty or forty feet, and it everywhere sank and rose and tumbled like a crashing chaos. It was a spectacle not less sublime than appalling, well fitted to fill any reflecting observer with awe, and at the same time, to inspire him with devout gratitude to the Divine Being, whose providence watched over the ship's company, and preserved them in the midst of such dreadful perils.

Smyth Harbour.

Amusements among the crew.

A time of repose followed. The long calm of winter seemed at last to have set in. Captain Back, remembering the example of Parry, induced the officers to assist him in contriving some amusement for the men. Theatricals were got up; and the farce of Monsieur Tonson went off with hearty laughter and abundant plaudits. An evening school also was instituted, and kept vigorously going. The men, too, were encouraged

to promote mirth and jollity among themselves; and all could read, most could write, some recited whole pages of poetry, and others sang French songs. Yet they were miserable. Few had the reckless light-heartedness of thorough man-of-war-men; and fewer still the steady gladsomeness of experienced Christians. Most had been colliers or whale-fishermen, and still retained all the roughness of their rough calling. They were unsociable and morose, suspicious and moody, and commonly gave a cold reception, or no reception at all, to the hearty efforts of the officers to lead them into the wholesome habit of amusing themselves with games, or to cheer their spirits, and while away the long hours of the winter evenings. Periods of inaction, therefore, were periods of gloom and sadness, and came also to be periods of sinking into despondency under trivial attacks of sickness; so that the fearful incidents of this most fearful voyage had at least the advantage of rousing up the minds of the crew from a ruinous indulgence of morbid feeling.

Gloom and despondency

A hurricane burst forth on the 22d of December, and continued to rage till the 24th. No man could face it. The topmasts shook like wands, and the lee-rigging was forced out like a bow. The temperature was higher by twenty degrees than it had been a few days before; and yet so rapidly did the careering air abstract the heat from the human body, that a very short exposure to it would have certainly killed the hardiest. Several seamen, who endeavoured to perform some duty outside the ship, were instantly frost-bitten, and driven back; and the officer of the watch, when merely going from the housing to the tafrail to register the thermometers, was frost-bitten over all his face. The wind, happily, was off shore, and did not much threaten to break up the floe; but it acted nearly at right angles against a strong tidal current, and drove the floe to the east,—insomuch that, after it subsided, the ship was found to be twelve or fourteen miles distant from Cape Comfort.

Tremendous hurricane.

Early in January, several commotions, and crashes,

CHAP. X.

and disruptions occurred; and before the middle of that month, the Terror was carried on her ice-cradle some sixteen miles farther along the coast. During the next four weeks much suffering was endured from intense cold, a severe gale, the death of two of the crew, and the bad health of several. Everything now was inexpressibly dreary. "The eight months since we left England," says Captain Back, "seemed longer than any three years of my former not unadventurous life; days were weeks, weeks months, and months almost years."

Extreme suffering

But an event was at hand, which, for some time, allowed not a moment more for moodiness. The floe, which had been at once cradle, waggon, and bulwark to the ship, cracked and split to within about forty paces of it, and gave startling omen of being ready to go to pieces. It had become a home to the crew, and had been made snug with snow-walls, snow-houses, galleries, and court-yard, which served well some of the best purposes of a deck. It still held together, shattered and crazy, for three or four days, and carried them within sight of Seahorse Point, the south-eastern extremity of Southampton Island. Early on the morning of the 18th of February, there occurred in rapid succession, first, a terrific crash on the eastern edge of the floe, next a hoarse rushing sound across it, next several severe shocks against the ship, and next a visible rending of the floe right through the centre. The ship now began to strain and quiver; and she then heeled over to port, and relieved herself about six inches from an embankment which had been built against her side. At this time the crashing, grinding, rushing noise, beneath the ship and all over the floe, were appalling. About two hours after, a commotion like an earthquake took place, and made cracks across the snow-houses, galleries, and court-yard, and forced the ship to creak through all her timbers. A semicircular rampart of ice advanced from the opened sea beyond the floe; and enormous hillocky masses, some round and massy, and others like small packs, had

Rending of the ice.

broken loose, and seemed big with woe and ruin. At this awful moment, the tumult suddenly ceased. But the ship was in a most perilous position: the ice all around was so splintered and jagged, and so fissured and holed, that it could neither bear a boat, nor be made a depository of provisions; and the land was seven or nine miles distant, and probably could not have been reached by even the expertest ice-man who should have had nothing but his own life to take care of.

Perilous position of the ship.

On the following day, the perils continued and increased; and on the 20th, they reached a crisis. All the ice was again in motion, and one of its heaves broke up the floe along the starboard side of the ship, and threw down everything in its way. Some of the galleries now floated away, looking like tunnels; and the ship herself was in open water, subject to the rubs and nips of the ice-masses. A little after, she was violently struck far below the water-line, and creaked hideously from stem to stern, as if she were about to go asunder. All the crew were confounded; and even the poor sick went tottering aft in an agony of terror. But the ship lifted herself fully eight inches from the pressure of a force which would have crushed a less strengthened vessel to atoms; and the assailing ice-mass either passed in part beneath the bottom, or was wedged against the large masses at the extremities. For upwards of three weeks, similar scenes, and worse, were frequent; and never on the Polar Seas was there a more marvellous scene of awful dangers without a catastrophe, and of providential deliverances without any instrumentality of man. The scenery was sometimes magnificently solemn, with such a perspective of moving, frowning, stupendous towers and bulwarks, as few human beings have ever witnessed; and often, on the contrary, was it so enwrapped in fog that its dreadful perils were much more readily heard than seen.

The ice in motion.

On several occasions, the ship was violently nipped, and lifted herself up vertically to more than twice the

CHAP. X.

Terrific commotion among the ice

former height, and groaned from the severity of the under-pressure. Once the ice-masses near her came impetuously on, and tossed their enormous weight against her, and threw her up and considerably over to starboard. At another time, the lateral pressure crushed the contiguous ice into debris, and threw up a huge mass fully nineteen feet above the general level, and rolled the adjacent floe into hummocks, mounds, peaks, splinters, walls, and ramparts. At another time, after some alternations of commotion and quiet, and when all bad symptoms of an uproar had disappeared, the vast contiguous masses suddenly started into tumult, rubbed and tossed one another in furious conflict, flung piece over piece till all was a chaos, made the ship rise up abaft and tremble through hull and rigging, and accompanied the whole with such a whining, and screeching, and howling, as might have been taken for a revelry of demons. A pause ensued: and then came another outburst, with redoubled fury, hurling terrific masses headlong on the ship, and startling all the crew into fear of instant destruction; but at length jamming the ship tight and fast as if in a dock, and tumbling the loose masses eight or ten feet ahead. Worse scenes than even these followed; and three of the chief, which happened on respectively the 7th, the 11th, and the 16th of March, will be best given in Captain Back's own graphic words.

Captain Back's own narrative.

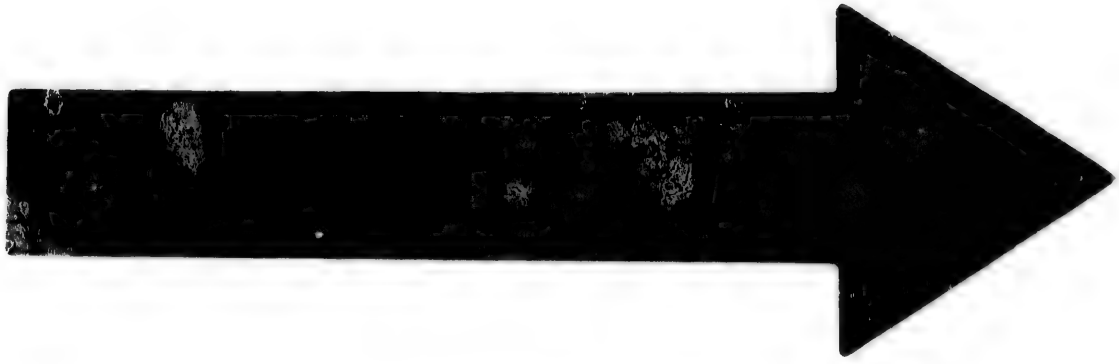
"Ominous rushing sounds," in the evening of the 7th of March, "were heard far off to the north-east and north-west. These gradually drew nearer, as the flood made its way either under the compact bodies that withstood the shock, or along the cracks and openings—gaining in these latter a furious velocity, to which everything seemed to yield. It happened that there were several of these around the ship; and when they opened on us like so many conduits pouring their contents to a common centre, the concussion was absolutely appalling, rending the lining and bulkheads in every part, loosening some shores or stanchions, so that the slightest effort

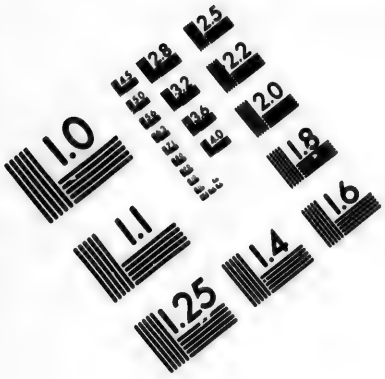
would have thrown them down, and compressing others with such force as to make the turpentine ooze out of their extremities. One fir plank, placed horizontally between the beams and the shores, actually glittered with globules. At the same time, the pressure was going on from the larboard side, where the three heaviest parts of the ruin of the floe remained, cracked here and there, but yet adhering in firm and solid bodies. These of course were irresistible; and after much groaning, splitting, and cracking, accompanied by sounds like the explosion of cannon, the ship rose fore and aft, and heeled over about 10° to starboard."

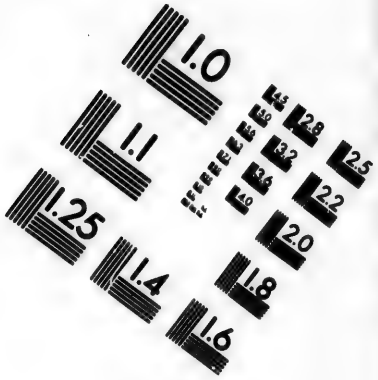
Severe pressure on the ship.

"At this time," past nine o'clock in the evening of the 11th of March, "she showed symptoms of suffering in the hull, which was evidently undergoing a severe ordeal. Inexplicable noises, in which the sharp sounds of splitting, and the harsher ones of grinding, were most distinct, came in quick succession, and then again stopped suddenly, leaving all so still that not even a breath was heard. In an instant the ship was felt to rise under our feet, and the roaring and rushing recommenced with a deafening din alongside, abeam and astern, at one and the same instant. Alongside, the grinding masses held the ship tight as in a vice; while the overwhelming pressure of the entire body, advancing from the west, so wedged the stern and starboard quarter, that the greatest apprehensions were entertained for the stern-post and frame-work abaft. Some idea of the power exerted on this occasion may be gathered from this:—At the moment which I am now describing the forepart of the ship was literally buried as high as the flukes of the anchors in a dock of perpendicular walls of ice,—so that, in that part she might well have been thought immoveable. Still, such was the force, applied to her abaft, that after much cracking and perceptible yielding of the beams, which seemed to curve upwards, she actually rose by sheer pressure above the dock forward, and then with sudden jerks did the same abaft.

Increase of the pressure







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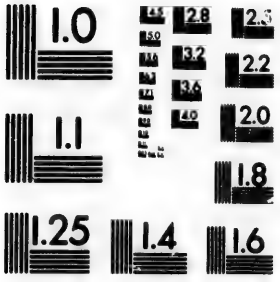

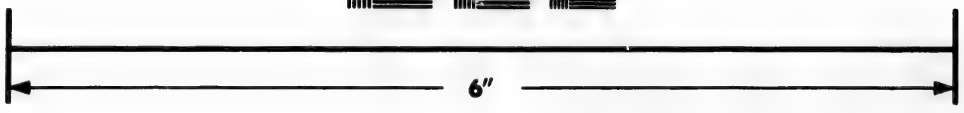

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CHAP. X.

During these convulsions many of the carpenters, and others stationed below, were violently thrown down on the deck as people are in an earthquake. It was a moment of intense suspense."

Upheaval of the ship.

"On the 16th of March, another rush drove irresistibly on the larboard quarter and stern, and, forcing the ship ahead, raised her upon the ice. A chaotic ruin followed; our poor and cherished court-yard, its wall and arched doors, gallery, and well-trodden paths, were rent, and in some parts ploughed up like dust. The ship was careened fully four streaks, and sprung a leak as before. Scarcely were ten minutes left us for the expression of our astonishment, that anything of human build could outlive such assaults, when another equally violent rush succeeded; and in its way toward the starboard quarter, threw up a rolling wave thirty feet high, crowned by a blue square mass of many tons, resembling the entire side of a house, which, after hanging for some time in doubtful poise on the ridge, at length fell with a crash into the hollow, in which, as in a cavern, the after part of the ship seemed embedded. It was indeed an awful crisis, rendered more frightful from the mistiness of the night and dimness of the moon. The poor ship cracked and trembled violently; and no one could say that the next minute would not be her last, and, indeed, his own too, for with her our means of safety would probably perish."

An awful crisis.

During all the period of disasters after the disruption of the floe, the ship was carried hither and thither over a range of from twenty-six to forty-eight miles north-west of Seahorse Point, and seldom further than about ten miles from the nearest land. But after the 16th of March, she set pretty steadily toward the south-east, and kept a good deal nearer the shore. The officers, at a formal consultation, agreed that she now seemed liable to be lost at any moment, and that a light boat, with provisions, should, if possible, be landed to serve as a last resource, to communicate with the Hudson's Bay Company's factory, in the event of her going down.

Consultation of the officers.

She still held marvellously firm, and continued to be cradled on a small piece of floe. On the 16th of April, apparently by some conflicting action of strong calm currents, she lost the sides of her cradle; yet, even then, she retained the base of it, and was borne along on this as on a truck. Four days after, when she was near a small bay about eight miles off Seahorse Point, she was met by rolling waves of ice, moving at long intervals, and accompanied with crashing sounds like thunder. One, in particular, not more than thirty paces distant, reared itself at least thirty feet on a small floe, and bore slowly down upon her quarter; and though she was herself high out of the water on the ice, this topped over her like a tower. She continued for hours to struggle with the commotion, and was all the while drifting, amidst loose tumbling blocks and masses, toward a bank of firm land-ice, where her imminent peril would have become still more imminent. Destruction seemed certain, and the crew were waiting for it; but, at what appeared the very crisis of peril, Divine Providence suddenly arrested the tumult.

Rolling waves of ice.

On the 21st of April they were still in the vicinity of Seahorse Point, but on the 23d they were twelve or fifteen miles from it, with the ship's head pointing toward Mill Islands, and from that time onward they receded pretty regularly from the scenes of the winter's perils. As soon as they found themselves fairly on their new course, they set about re-fitting. The sails, which had for so many months been useless, were put in order; the timbers were scoured; and the greater part of the provisions, which had been kept on deck ready for instant removal on an emergency, was re-stored. Dangers were still apprehended, but, for the present, every thing was calm.

The ship refitted.

The ice remained for some time more or less open, but from the 7th of May till the 2d of June it was again quite compact, and it afterwards broke up slowly and fitfully, without any remarkable commotion. On the

CHAP. X.

Preparations for caulking.

15th of June, most part of the ship's hull above the water-level was sufficiently thawed to allow preparations for caulking and for coating with tar. The mere pressure upon it during the frost had formed an icy cement, so tough and adhesive, that fragments stuck to the planking, even in the minute spaces between the strokes of the pickaxe; and the hull looked as if it had sat in a bed of some fine plastic compound, which had become slowly indurated to the density of limestone rock.

So late as the 20th of June, the ship lay immoveably fixed in the middle of a large floe, and though disruptions and openings then became common at comparatively small distances from her, she continued as firm in her cradle as in the beginning of February. No alternative offered but to cut her out with implements, and this proved an enormous labour, and occupied all the crew till the 11th of July. On that day the men had paused to draw breath, when suddenly the ice-rock burst asunder, barely allowing them time to clamber up in hot haste for safety. "Scarcely," says Captain Back, "had I descended to my cabin, when a loud rumbling notified that the ship had broken her ice-bonds and was sliding gently down into her own element. I ran instantly on deck, and joined in the cheers of the officers and men, who, dispersed on different pieces of ice, took this significant method of expressing their feelings. It was a sight not to be forgotten. Standing on the tafrail, I saw the dark bubbling water below, and enormous masses of ice gently vibrating and springing to the surface; the first lieutenant was just climbing over the stern, while other groups were standing apart, separated by this new gulf; and the spars, together with working implements, were resting half in the water, half on the ice, whilst the saw, the instrument whereby this sudden effect had been produced, was bent double, and in that position forcibly detained by the body it had severed."

The ship cut out of the ice with implements.

A piece of the base of the ship's ice-cradle, however, still clung to her, and continued to do so till the 13th,

and when it did break up, it did not set her free. On the contrary, she slowly rose, heeled over to port, and seemed for some moments to be entirely capsizing. Those of her company who were on board felt suddenly as if on the verge of eternity. Yet they evinced no confusion, and cleared off and provisioned the boats with astonishing coolness and promptitude. She went so completely on her beam ends that no man in her could move without holding on; but she went no farther. A submerged ice-mass, whose end was congealed to her bottom, and whose other end projected right out from her, was the cause of her overturn, and it now held her firm in her perilous position. Officers and men beheld it with awe, and set promptly and energetically to the arduous task of sawing it off. They worked from eleven o'clock in the forenoon till two in the following morning, afraid that a squall might arise and ruin them; and when at last they had only ten feet more to saw, but were compelled by fatigue and drowsiness to go in quest of a short repose on the deck, suddenly there was a grating sound of breaking ice, and, before a word could be spoken, the ship sprang free and entirely righted. The cheering of the crew was vociferous, and their joy unbounded. Four months, all but a day, had the ship been in the grip of the ice; and now, after a romance of perils, and a cycle of providential deliverances, she was again subject to the control of man.

She is thrown on her beam-ends by a submerged ice-mass.

She is set free.

The last scenes we have described took place in the vicinity of Charles Island, about midway between Cape Comfort and the mouth of Hudson Strait. The query was naturally raised whether anything could now be done to prosecute the object of the expedition; but the ship was found to be far too shattered to go again in her present state into collision with the ice, and a serious doubt soon arose whether she should be able to cross the sea to a British harbour. There was nothing for it but to run her, with all possible speed, toward home. She was utterly crazy, and broken, and leaky; and not even

She is found to be thoroughly disabled.

CHAP. X.

her perilous tumbling among the ice-masses, around the dismal Cape Comfort and the horrid Seahorse Point, were more perilous than the struggling, staggering, water-logged voyage which she made across the Northern Atlantic. She at last reached the north-west coast of Ireland, gradually sinking by the head, and was run ashore in Lough Swilly on the 3d of September; and had she been three hours longer at sea, she would certainly have gone to the bottom. Her whole frame proved to be strained and twisted; many of her bolts were either loosened or broken; her forefoot was entirely gone; and upwards of twenty feet of her keel, together with ten feet of her stern-post, had been driven over more than three feet and a half on one side, leaving a frightful opening astern for the free ingress of water. Well, therefore, might her crew, when they afterwards looked on her as she lay dry on the beach at low water, express astonishment that ever they had floated back in her to British shores, and ample occasion had they to cherish adoring gratitude to the all-powerful and all-benevolent Being who had preserved them.

Return of the Terror to Ireland.

Main part of the object for which the Terror expedition was fitted out in 1836, and which all then suffered so sad a defeat through the disasters of the voyage, was accomplished by widely different means in 1839. Allusion is made, on page 307, to Arctic land expeditions in 1837 and 1838, by Messrs. Dease and Simpson, two officers of the Hudson's Bay Company; and a reason is there given for not introducing a notice of these expeditions to this volume. But another expedition, of broader character and far more extensive results, was conducted by the same parties in 1839. This was accomplished, in a great degree, in boats on the sea; it traversed unknown straits and inlets as extensively as had been done by some of the maritime expeditions; it traced much of the tract between Regent's Inlet and

Messrs. Dease and Simpsons' expedition.

Point Turnagain, and discovered a seeming strait between Boothia Felix and the American mainland; and it was supposed to stultify two of the principal assertions of Sir John Ross, and to contribute an important element toward the solution of the vexed question of the north-west passage; and for these reasons a brief account of at least the most striking details of it seems here desirable.

Commencement of the voyage.

Messrs. Dease and Simpson descended the Coppermine River, and on the 3d of July they took advantage of the first opening of the ice to commence their voyage. They had a week's hard work to reach the rocky heights of Cape Barrow, at the west side of the entrance of Bathurst Inlet; and thence they beheld the great expanse of Coronation Gulf, extending away from their feet to the horizon, partially cleared of ice, though long after the same date in the preceding year it was seen compactly frozen. They arrived at Point Turnagain at midnight, on the 20th, and were detained there four days by a violent easterly gale, and they encountered great peril in doubling Cape Alexander, on the 27th and the 28th, amidst very heavy drifting ice. This cape is situated in lat. 68° 56′ N., and long. 106° 40′ W.; and was discovered and named by the expedition in the preceding year, and was within a few miles of the farthest point which they then reached. The rise and fall of the tide at it was about three feet, and was the greatest which they observed in the Arctic Seas. A large tract of territory, with a bold lofty cape in the front, and separated from the mainland by a considerable strait, extends far away on the north, and this was called Victoria Land. The south side of the intervening strait, eastward from Cape Alexander to a remarkable headland, Cape Geddes, in lat. 68° 33′ N., and long. 93° 10′ W., is a spacious bay, reaching as far south as 67° 40′, and intricately diversified by innumerable islets, and by a countless succession of minor inlets and long narrow projecting points.

Cape Alexander.

Labyrinth Bay.

CHAP. X.

Messrs. Dease and Simpson found the route through this bay extremely intricate, and the labour of surveying it not a little harassing; but while perplexed beyond measure to thread their way among the labyrinths, they derived great advantage from the protection which the islets afforded from the crushing force of the seaward ice. On one little headland which projects beyond the range of the islets, and is situated in lat. 68° 7′ N., and long. 103° 37′ W., and to which they gave the name of White Bear Point, they were detained by the ice from the 1st to the 5th of August. Esquimaux, mostly old persons, were met with whenever they landed, and appeared to subsist in single families, or in very small parties, and to spend the months from June till October in deer-hunting inland, and from October till June in seal-catching on the coast. A river, to which the explorers gave the name of Ellice River, falls into the sea in lat. 68° 2′ N., and long. 104° 15′ W., and has twice the volume of the Coppermine, and is much frequented by rein-deer and musk-oxen in summer. The country around comprises green flats, small lakes, and knotty knolls.

White Bear Point.

Ellice River.

Finding all the east side of the great bay tending in a northerly direction, Messrs. Dease and Simpson expected nothing else than to be carried on to the Cape Felix of Sir James C. Ross; but on rounding Cape Geddes, on the evening of the 10th of August, they suddenly opened a strait extending to the southward of east where the rapid rush of the tide left scarcely a doubt of open sea-communication with the estuary of Back's River. This strait is ten miles wide at either extremity, but contracts to three miles in the centre, and has there a deep, though narrow channel. On the 12th of August, the explorers encountered a most terrific thunderstorm, and next day they had a rough wind from the west, accompanied by a very dense fog. But they ran rapidly along the strait, passed Point Richardson and Point Ogle, entered the estuary of Back's

Inlet to Back's Estuary.

River, and careered on till the darkness of the night and the increasing fury of the gale drove them ashore beyond Point Pechell. The wind veered to the north-east, and continued till the 16th, and then they directed their course, with flags flying, to Montreal Island, and landed on it near the spot where Back had encamped.

Montreal Island.

They had thus ascertained that the American continent is separated from Boothia to the westward of the Back Estuary; and though they might now have very justly regarded their mission as completed, they had too much of the arduous and adventurous spirit of geographical discoverers not to feel anxious to ascertain, even at the cost of peril and privation, whether a separation existed also to the eastward. They therefore rowed toward the furthest visible land in the north-east, a bluff, bold, rocky, singularly-shaped promontory, situated in lat. 68° 4′ N., and long. 94° 35′ W. They reached this at sunrise on the 17th, after six hours of unremitting labour at the oar, and they called it Cape Britannia. Here they remained wind-bound till the 19th; and on a beetling rock which sheltered their encampment from the sea, and which forms the most conspicuous object over a great extent of coast, they erected a strong conical cairn, fourteen feet in height. On the 19th they first crossed a fine bay, due east, with no small toil and danger, and then made a fine run of forty miles along a north-eastern stretch of coast; and next day they struggled all morning among shoals and breakers, without gaining a greater distance than three miles, and then felt obliged to take refuge in the mouth of a small river. This proved the extreme point of their voyage, and they called it Castor and Pollux. From a limestone ridge about a league inland they saw in the north-east some very remote blue land which seemed, in all probability, one of the southern promontories of Boothia; they saw also two considerable islands far in the offing, and other islands, high and distant, extending from the east to the east north-east, and they observed that the

Cape Britannia.

The extreme point of the voyage.

CHAP. X.

low main-shore in their immediate vicinity, first stretched only about five miles to the east, and then appeared to turn off greatly to the right. They could scarcely doubt, therefore, that they had arrived at the large gulf variously called Akkolee and Boothia, which merges northward into Prince Regent's Inlet, and extends southward to within forty miles of Repulse and Wager Bays.

Supposed insulation of Boothia Felix

Thus apparently were Sir John Ross's assertions, that an isthmus connects Boothia Felix with the American mainland, and that the Polar Sea has a level of thirteen feet higher than the Gulf of Boothia, ascertained to be thorough errors. Hence came the declaration to be made in high quarters, "Where, according to Sir John Ross, the broad ocean leans against the land, Messrs. Dease and Simpson navigated a continuous sea, without leaping the imagined isthmus, or looking down the descent of thirteen feet measured by Sir John Ross's theodolite." The explorers, however, made allusion to Sir John mainly to express their admiration, as well they might, of his extraordinary escape from this perilous region. They themselves could not have attempted to penetrate farther without being desperately foolhardy. But they wished to make the most of their circumstances, and therefore resolved to take a look on their way back at the northern shores of the strait which they had navigated.

Examination of the south shore of Boothia

On the 21st of August they left Cape Britannia, and commenced their voyage homeward; and on the 24th they crossed over from Point Richardson to the southern shore of Boothia. This shore they traced westward for about sixty miles, to a promontory which they called Cape Herschel, and which is situated nearly opposite Cape Geddes, and they found it to be a low uninteresting limestone tract, abounding in rein-deer, musk-oxen, and old native encampments. A good deal of ice was seen to the west, and a cairn was constructed on Cape Herschel. On the 25th they recrossed the strait, and

retraced, for some time, their outward route. The weather now became unsettled and severe, and confined them during four days to one spot. But on the 6th of September, when better weather had returned, they struck from the Ellice River twenty-two miles north-north-westward to an extensive island, ran for twenty miles north-westward along the coast of this, and then struck about the same distance northward to the nearest point of Victoria Land. The latter part of this run was performed under night, and they say respecting it, "We have never seen anything more brilliant than the phosphoric gleaming of the waves when darkness set in; the boats seemed to cleave a flood of molten silver, and the spray dashed from their bows before the fresh breeze fell back like showers of diamonds into the deep. It was a cold night, and when we at last made the land, cliffs faced with eternal ice obliged us to run for a couple of leagues before we could take the shore with safety."

The sea off Ellice River

They explored the coast of Victoria Land for upwards of 150 miles, and found it incomparably the boldest which they had anywhere seen in the Arctic Seas. Often, near the shore, no bottom could be reached with thirty-five fathom of line, and everywhere the cerulean hue of the water indicated a profound depth. There are several noble bays, and the largest, which they called Wellington Bay, recedes to lat. 69° 40′ N., and is twenty miles wide, correspondingly long, and screened by snow-clad mountains. The extreme point reached by the expedition bore by computation fifty miles north-north-east of Cape Barrow; and there the coast begins again to trend northward of west. What relation Victoria Land bears to Wollaston Land, situated north of the west side of Coronation Gulf, was not ascertained; but probably the two countries are separated by a wide channel.

The coast of Victoria Land.

On the 10th of September, with a side wind and a rough sea, Messrs. Dease and Simpson recrossed the

CHAP. X.

magnificent islet-studded sound to the mainland; and they were greatly delighted, on the passage, by the firm bearing of their gallant, old, severely-tried boats. They afterwards were vexed for several days by furious winds; but on the 16th they entered the Coppermine River, after by far the longest voyage ever performed by boats on the Polar Sea; and on the 24th, they safely reached Fort Confidence.

Return of Messrs. Dease and Simpson up the Coppermine.

The supposed great bay extending from the farthest point reached by Messrs. Dease and Simpson, eastward to the Fury and Hecla Strait, now became an object of intense interest. The mystery which overhung the north-east corner of the American mainland seemed at last to be almost revealed. Let but the coast-line from the mouth of the Castor and Pollux to the eastern extremity of the Gulf of Akkolee be examined, so as to connect the discoveries of Messrs. Dease and Simpson with those of the second voyage of Captain Parry and those of the second voyage of Captain John Ross, and all would become plain

In 1846, accordingly, the Hudson's Bay Company fitted out an expedition to effect this object. The starting point was Churchill station, on the south-west coast of Hudson's Bay; the route was by way of Repulse Bay, first up the western, and next up the eastern coast of the Gulf Akkolee; and the mode of progress was chiefly navigation in two boats, and partly land-portage and travelling. The number of men was thirteen; and the commander was Mr. John Rae. So highly was the enterprise estimated by its promoters, that the Governor-in-chief of the Company's territories said, respecting it, in his official instructions to Mr. Rae, "Let me assure you that we look confidently to you for the solution of what may be deemed the final problem in the geography of the northern hemisphere. The eyes of all who take an interest in the subject are fixed on the Hudson's Bay Company. From us the world expects the final settle-

Expedition of Mr. Rae.

ment of the question that has occupied the attention of our country for two hundred years; and your safe and triumphant return, which may God in his mercy grant, will, I trust, speedily compensate the Hudson's Bay Company for its repeated sacrifices and protracted anxieties." Only the final object of the expedition, however, and not any details of the progress northward by which that object was attained, belongs to the subject of the present volume; so that all we shall have to say of it must be condensed into a very brief and general statement.

Progress to the Gulf of Akkolee.

The party left Churchill at the breaking up of the ice, on the 5th of July 1846. They quitted the head of Repulse Bay, in lat. 66° 32′ N., and succeeded in conveying one of their boats to the southern extremity of the Gulf of Akkolee, in lat. 67° 13′ N. They found a chain of lakes lying across the isthmus, and derived great aid from it to the conveying of the boat. They proceeded along the coast of the Gulf of Akkolee till the 5th of August,—and they observed the tides to be averagely far higher than in the Polar Sea, but exceedingly irregular, and varying in rise from four to ten feet; and already they began to entertain a strong presumption that Boothia, after all, is a peninsula of the American mainland. But they were utterly baffled in their progress by ice and fogs and northerly winds; and felt obliged to return at about lat 67° 30′ N., and to retrace their steps to spend the winter at Repulse Bay. There they built a house, and procured a stock of provisions by hunting and fishing, principally rein-deer and salmon; and, excepting what was used for cooking, they had no fuel throughout the winter.

Wintering at Repulse Bay

On the 5th of April 1847, six of the party again started north with sledges, and travelled along the west shore of the Gulf of Akkolee; and on the 18th, they reached the vicinity of Sir John Ross's most southerly discoveries. The question of the supposed communication with the Polar Sea was here to be set at rest. They

CHAP. X.

decided now to strike off from the coast across the land, as nearly north as possible; and they had a tiresome march through snow, and across three small lakes; and at noon, when near the middle of another lake of about four miles in length, they ascertained their latitude to be 69° 26′ 1″ N. They walked three miles more, and came to still another lake; and as there was not yet any appearance of the sea, Mr. Rae gave orders to the men to prepare their lodgings, and went forth alone to endeavour to discover the coast. He arrived in twenty minutes at an inlet of not more than a quarter of a mile wide, and traced this westward for upwards of a league, and there found his course once more obstructed by land. Some rocky hillocks were near; and thinking he saw from the top of these some rough ice in the desired direction, he inhaled fresh hope, and pushed eagerly on to a rising ground in the distance, and there he beheld stretched out before him an ice-covered sea, studded with innumerable islands. But it was the sea of Sir John Ross,—the Lord Mayor's Bay of the disastrous voyage of the Victory; and the islands were those which Sir John had named the Sons of the Clergy of the Church of Scotland. Mr. Rae, therefore, had simply crossed a peninsula of the Gulf of Akkolee; and thus did he ascertain that the shores which witnessed the woes of the Victory, the eastern shores of Boothia, are continuous with the mainland of America.

Arrival at Lord Mayor's Bay.

Sir James Clarke Ross, he who figured in the voyage of the Victory as Commander Ross, says, "Mr. Rae's description of the inlet he crossed over to in the south-east corner of Lord Mayor's Bay, accords so exactly with what I observed whilst surveying its shores, that I have no doubt of his having reached that inlet, on which I found the Esquimaux marks so numerous, but of which no account was published in Sir John Ross's narrative." Mr. Rae appropriately named the peninsula Sir John Ross's Peninsula, and the isthmus, connecting it with the mainland, and flanking the inlet. Sir James

Ross's Peninsula.

Ross's Isthmus. The latter is only one mile broad, and has three small ponds; but it bears evident marks of being an autumnal deer-pass, and, therefore, a favourite resort of the Esquimaux. Mr. Rae had thus reached the goal of his wishes; and he did not turn away from so memorable a spot, till, with humble and grateful heart, he offered thanks to the Divine Being for bringing to a successful issue his perilous exploration.

Mr. Rae's emotions at his success.

A progress to the farthest point reached by Messrs. Dease and Simpson was not attempted; for it was now ascertained that this must comprise a journey over land, and either a voyage across a large land-locked estuary, or a coasting along its shores; and for these the explorers had neither time nor means. They retraced their route, with little deviation, along the shore of the gulf, and, on the 5th of May, arrived at Repulse Bay. On the 12th, Mr. Rae, at the head of a similar party, set out to examine the east side of the gulf; and on the 27th, amidst a bewildering snow-storm, he reached his ultimatum at a head-land, which they called Cape Crozier. But during a blink of the storm, he got a clear view of a headland nearly twelve miles farther on, which he called Cape Ellice, and computed to be in lat. 69° 42′ N., and long. 85° 8′ W., or within about ten miles of the Fury and Hecla Strait. On the 12th of August, the whole original party embarked at Repulse Bay; and on the 31st, they arrived at Churchill.

East side of the Gulf of Akkolee.

CHAPTER XI.

The Franklin Expedition and Searching Squadrons.

Equipment and Sailing of the Erebus and the Terror; Public anxiety about their Fate; Comprehensive Plan of Operations to Search for them; Proceedings of the Herald and the Plover by way of Behring's Straits; Proceedings of an Overland Party on the Central Parts of the Arctic American Coasts; Proceedings of the Enterprise and the Investigator by way of Lancaster Sound; Supplementary Measures of Search; Increased Public Anxiety and New Searching Expeditions; Despatch of the Enterprise and the Investigator to Behring's Strait; Overland Exploration of the Coasts west of Cape Walker; New Government Expedition up Baffin's Bay to the Northern Archipelago; Private Expedition under Sir John Ross; Expeditions at the instance of Lady Franklin; Expedition from America; The North Star; Proceedings of the Prince Albert; Last view of the Exploring Ships; Traces of Sir John Franklin.

CHAP. XI.

The occasion of the expedition.

THE return of Captain Sir James Clarke Ross, in 1844, from his brilliant career in the Antarctic Ocean, gave a sudden stimulus to the old craving for the discovery of a north-west passage. The ships Erebus and Terror were now famous for their fitness to brave the dangers of the ice, and could be re-equipped at comparatively small cost. Naval officers and whale-fishermen and hardy seamen were fired with the spirit of adventure, and breathed hot rivalry for the distinction of perilous service. Statesmen panted to send the British flag across all the breadth of the Polar Sea; savans longed for decisions in terrestrial magnetism which could be obtained only in the regions around the magnetic pole;

and though merchants and other utilitarians could never again regard the old notion of a commercial highway to the Indian Seas through Behring's Straits as worthy of one moment's consideration, yet multitudes of the curious, among all classes of society, were impatient to have the veil penetrated which had so long hid from the world's wondering gaze the mysteries of the ice-girt Archipelago of the north. The very difficulties of the enterprise, together with the disasters or failures of all former expeditions, only roused the general resolution, and drove it, like that of a headstrong antagonist, into greater firmness of will.

Obstacles to it overcome.

Sir John Barrow, in particular, was all alive on the subject. He had for thirty years been the fervent advocate of everything which could throw light on the Arctic regions, and had incessantly bent in that direction the powerful influence which he wielded as Secretary to the Admiralty; and now again was he at his vocation. Lieutenant-Colonel Sabine, also, whose opinion carried more weight than that of any other man, declared "that a final attempt to make a north-west passage, would render the most important service that now remained to be performed towards the completion of the magnetic survey of the globe." The Lords of the Admiralty and the Council of the Royal Society gave a formal assent, and were presumed to be heartily or even fervently in earnest. And Sir John Franklin, the hero of some most perilous exploits within the Arctic circle, who now stood out to view as the likeliest man to conduct the desiderated enterprise, had said in 1836, and continued to say still, "that no service was nearer to his heart, than the completion of the survey of the north-west coast of America, and the accomplishment of a north-west passage." The sentiment, therefore, which years before had been driven to silence, and branded as reckless folly and bastard patriotism, once more spoke out in seeming soberness and wisdom, "that it would be an intolerable disgrace to this country were

Sir John Franklin's own opinion of it.

CHAP. XI.

the flag of any nation to be borne through the north-west passage before our own."

Equipment of the Erebus and the Terror.

The Erebus and the Terror were ordered to be got ready. Both had braved all the perils of the Antarctic expedition under Sir James C. Ross; and the latter was the ship of the terrific ice voyage of 1836 in Hudson's Bay. They were the best tested and the best appurtenanced vessels which had ever faced the Frozen Regions; and each was now fitted with a small steam engine and screw-propeller. Sir John Franklin was appointed to the chief command, and hoisted his flag in the Erebus; and Captain Richard Crozier, who had been the distinguished colleague of Sir James C. Ross in the Antartic voyage, was appointed to the Terror. So many naval officers volunteered their services, that, had all been accepted, they might themselves have completely manned the ships. The total number of persons put on board was 138, and they formed as select, resolute, and experienced a body of adventurers as ever went to sea. The transport Baretto Junior, also, under the command of Lieutenant Griffith, was laden with extra stores, to be discharged into the ships in Davis' Strait.

Instructions to Sir John Franklin.

The official instructions to Sir John Franklin were minute, comprehensive, and far-sighted, and made provision for all important and probable contingencies. But only those of them which relate to the main conduct of the expedition possess much public interest, and these, taken in connection with the mournful and exciting mystery into which the ships so soon passed, seem too momentous to allow of any abridgement. "On putting to sea," said they, "you are to proceed, in the first place, by such a route as, from the wind and weather, you may deem to be the most suitable for despatch, to Davis' Strait, taking the transport with you to such a distance up that strait as you may be able to proceed without impediment from ice, being careful not to risk that vessel by allowing her to be beset in the ice, or exposed to any violent contact with it. You will then

avail yourself of the earliest opportunity of clearing the transport of the provisions and stores with which she is charged for the use of the expedition, and you are then to send her back to England, giving to the agent or master such directions for his guidance as may appear to you most proper, and reporting by that opportunity your proceedings to our secretary for our information. You will then proceed in the execution of your orders into Baffin's Bay, and get as soon as possible to the western side of the strait, provided it should appear to you that the ice chiefly prevails on the eastern side or near the middle, the object being to enter Lancaster Sound with as little delay as possible. But as no specific directions can be given owing to the position of the ice varying from year to year, you will, of course, be guided by your own observations as to the course most eligible to be taken, in order to ensure a speedy arrival in the sound above mentioned. As, however, we have thought fit to cause each ship to be fitted with a small steam engine and propeller, to be used only in pushing the ships through channels between masses of ice when the wind is adverse, or in a calm, we trust the difficulty usually found in such cases will be much obviated. But as the supply of fuel to be taken in the ships is necessarily small, you will use it only in cases of difficulty.

What to do in Baffin's Bay.

"Lancaster Sound and its continuation through Barrow's Strait having been four times navigated without any impediment, by Sir Edward Parry, and since frequently by whaling ships, will probably be found without any obstacles from ice or islands; and Sir Edward Parry having also proceeded from the latter in a straight course to Melville Island, and returned without experiencing any or very little difficulty; it is hoped that the remaining portion of the passage, about 900 miles, to Behring's Strait may also be found equally free from obstruction; and in proceeding to the westward, therefore, you will not stop to examine any openings either

What to do in Lancaster Sound.

CHAP XI.

to the northward or southward in that strait, but continue to push to the westward without loss of time, in the latitude of about 74½°, till you have reached the longitude of that portion of land on which Cape Walker is situated, or about 98° west. From that point we desire that every effort be used to endeavour to penetrate to the southward and westward in a course as direct towards Behring's Strait as the position and extent of the ice, or the existence of land, at present unknown, may admit.

What to do at Cape Walker.

"We direct you to this particular part of the Polar Sea as affording the best prospect of accomplishing the passage to the Pacific, in consequence of the unusual magnitude and apparently fixed state of the barrier of ice observed by the Hecla and Griper in the year 1820, off Cape Dundas, the south-western extremity of Melville Island; and we therefore consider that loss of time would be incurred in renewing the attempt in that direction. But should your progress in the direction before ordered be arrested by ice of a permanent appearance, and that when passing the mouth of the strait, between Devon and Cornwallis' Islands, you had observed that it was open and clear of ice, we desire that you will duly consider, with reference to the time already consumed, as well as to the symptoms of a late or early close of the season, whether that channel might not offer a more practicable outlet from the Archipelago, and a more ready access to the open sea where there would be neither islands nor banks to arrest and fix the floating masses of ice. And if you should have advanced too far to the south-westward to render it expedient to adopt this new course before the end of the present season, and if, therefore, you should have determined to winter in that neighbourhood, it will be a matter for your mature deliberation whether, in the ensuing season, you would proceed by the above mentioned strait, or whether you would persevere to the south-westward according to the former directions.

What to do respecting Wellington Strait.

"You are well aware, having yourself been one of the intelligent travellers who have traversed the American shore of the Polar Sea, that the groups of islands that stretch from that shore to the northward to a distance not yet known, do not extend to the westward further than about the 120th degree of western longitude, and that beyond this, and to Behring's Strait, no land is visible from the American shore of the Polar Sea. In an undertaking of this description, much must be always left to the discretion of the commanding officer, and, as the objects of this expedition have been fully explained to you, and you have already had much experience on service of this nature, we are convinced we cannot do better than leave it to your judgment." He was instructed also, in the event of reaching Behring's Strait, to proceed to the Sandwich Islands and Panama, and to put an officer ashore at the latter place with despatches.

How much left to Sir John's own discretion.

The ships sailed from the Thames on the 19th of May 1845. The Erebus and the Terror received the transport's stores and dismissed her in Davis' Strait, and then had abundant provisions of every kind for three years, besides five bullocks. They were seen by the whaler, Prince of Wales, on the 26th of July, moored to an iceberg, waiting for an opening through the long vast body of ice which extends along the middle of Baffin's Bay. They were then in lat 74° 48′ N., and long. 66° 13′ W., not far from the centre of Baffin's Bay, and about 210 miles from the entrance of Lancaster Sound.

The sailing of the Erebus and the Terror.

Toward the end of 1847, prolonged, earnest, disappointed expectation of their return gave place to anxiety about their safety. Not a word had been heard from them, nor the slightest trace of them obtained since they were seen by the Prince of Wales whaler; and apprehension became strong and general that they had shared a similar fate to the Fury of Sir Edward Parry, or the Victory of Sir John Ross. The government, therefore, promptly determined to send three expedi-

Public anxiety about their safety.

CHAP. XI.

A plan of searching expeditions.

tions in search of them. The first was a marine expedition by way of Behring's Strait, to be conducted by Captain Henry Kellett, of the ship Herald, of twenty-six guns, then in the Pacific, aided by Commander Thomas E. L. Moore, in the Plover, surveying vessel; and this was designed to relieve Sir John Franklin and his brave companions in the event of their having gone through the north-west passage, and stuck fast at some advanced point of the Polar Sea. The second was an overland and boat expedition, to be conducted by Sir John Richardson, to descend the Mackenzie River, and to examine the coast eastward to the Coppermine; and this was designed to afford relief in the event of the adventurers having taken to their boats westward of the Northern Archipelago, and forced their way to the American continent. And the third was a marine expedition to be conducted by Sir James Clarke Ross, with the ships Enterprize and Investigator, through Lancaster Sound and Barrow's Strait, to examine all the track of the missing ships westward as far as they could penetrate into the Archipelago; and this was designed to afford relief in the event of the adventurers having been arrested either in the very throat of the supposed passage, or at some point on this side of it, and of their attempting to retrace their steps.

Prompt execution of the plan.

This plan of search seemed comprehensive and noble, and was carried with all possible promptitude into execution. We, of course, cannot follow its three parts simultaneously, nor can we well mix up with the narrative of any of them an account of increasing anxieties and additional measures which arose before the three were completed; and we think we shall best promote clearness by narrating each to the end before saying anything of the next. We must also consult the utmost possible brevity, and shall therefore avoid all irrelevant details, except such as involve discovery or some striking novelty.

The Plover left Sheerness on the 1st of January 1848,

but, being a miserable sailer, did not reach Oahu, in the Sandwich Islands, till the 22d of August. She was then too late to attempt, that season, any efficient operations within the Arctic circle, and she passed on to winter quarters at Noovel, on the coast of Kamtschatka. The Herald meanwhile had received instructions from home, and gone northward as far as Cape Krusensteru in Kotzebue Sound, the appointed rendezvous. But not being prepared to winter there, nor prepared for explorations among ice, she returned in autumn to the Sandwich Islands.

The sailing of the Plover and the Herald.

On the 30th of June 1849, the Plover left Noovel, and on the 14th of July she anchored off Chamisso Island, at the bottom of Kotzebue Sound. Next day she was joined by the Herald and by the Nancy Dawson, the latter a yacht belonging to Robert Shedden, Esq., who, in the course of a voyage of pleasure round the globe, got intelligence in China of the intended expedition through Behring's Strait in search of Sir John Franklin, and nobly resolved to devote his vessel and himself to its aid. On the 18th the three vessels left Chamisso; on the 20th they were off Cape Lisburne; and on the 25th, after having passed Icy Point, they despatched a boat expedition under Lieutenant Pullen.

Boat expedition under Lieutenant Pullen.

This boat expedition was designed to connect the proceedings of the present voyage with those of the overland expedition under Sir John Richardson, and to institute search and provide succour for the missing adventurers, on the likeliest parts of the coast and mainland west of the Mackenzie River. It consisted of the Herald's pinnace, decked over, and three other boats, and comprised twenty-five men, and had nearly three months' provisions for its own use, besides five cases of pemmican for the use of Sir John Franklin's party. But it was accompanied also by Mr. Shedden in his yacht. It was directed, after proceeding a certain distance along the coast inshore, to return to a rendezvous with the Plover at Chamisso Island, but at the same

CHAP. XI.

time to despatch from its furthest point a detachment in two whale boats, well provisioned and equipped, to extend the search to the mouth of the Mackenzie River, and then to ascend that river and proceed homeward by Fort Hope and York Factory in the summer of 1850.

The Herald and the Plover at the pack.

The Herald and the Plover, in the meanwhile, bore away to the north, and on the 26th, in lat. 71° 5′ N., they reached the heavily-packed ice. They sailed some times along the edge of this, and some times through streams and among floes till the 28th, when they could proceed no further on account of the perfect impenetrableness of the pack. They were then in lat. 72° 51′ N., and long. 163° 48′ W. The ice, as far as it could be seen from the mast-head, trended away west-south-westward; yet, while densely compact for leagues distant, seemed to be broken by a water-line in the northern horizon. On the 28th the ships came again to the land, and the Herald bore in to examine Wainwright's Inlet, while commander Moore went on shore, erected a mark, and buried a bottle containing information about the boats. This place unhappily was found too shallow to afford harbourage, else it would have proved an excellent retreat on account at once of its high latitude, of the friendliness of the natives, of the obtainableness of rein deer's flesh, and of there being no nearer harbour to the south than Kotzebue's Sound, while even that place was regarded by the ice-masters as an unsafe wintering quarter.

Discovery of a new territory.

From the 1st of August till the 17th, Cape Lisburne being appointed for a rendezvous, the ships made active explorations in various directions near shore, and away northward as far as they could penetrate. On the 17th, the Herald discovered a new territory. "At forty minutes past nine," on that day, says Captain Kellett, "the exciting report of 'Land, ho!' was made from the mast-head; they were both soon afterwards crowded. In running a course along the pack towards our first

discovery, a small group of islands was reported on our port beam, a considerable distance within the outer margin of the ice. Still more distant than this group (from the deck) a very extensive and high land was reported, which I had been watching for some time, and anxiously awaited a report from some one else. There was a fine clear atmosphere (such a one as can only be seen in this climate), except in the direction of this extended land, where the clouds rolled in numerous immense masses, occasionally leaving the very lofty peaks uncapped, where could be distinctly seen columns, pillars, and very broken, which is very characteristic of the higher headlands in this sea—East Cape and Cape Lisburne, for example. With the exception of the north-east and south-east extremes, none of the lower land could be seen, unless, indeed, what I took at first for a small group of islands within the pack edge was a point of this great land. This island, or point, was distant twenty-five miles from the ship's track; higher parts of the land seemed not less, I consider, than sixty. When we hove to off the first land seen, the northern extreme of the great land showed out to the eastward for a moment, and so clear as to cause some who had doubts before to cry out, 'There, sir, is the land quite plain.'" They afterwards ran up to the island, and landed upon it, and found it a solid and almost inaccessible mass of granite, about four and a-half miles long, two and a-half miles broad, and fourteen hundred feet high. Its situation is lat. 71° 20′ N., and long. 175° 16′ W. The distant mountainous land seemed to be extensive; and was supposed by Captain Kellett to be a continuation of the lofty range seen by the natives off Cape Jakan in Asia, and mentioned by Baron Wrangell in his Polar voyages.

Appearance of the new territory.

In the vicinity of Cape Lisburne, on the 24th of August, the Nancy Dawson, and the return boats of Lieutenant Pullen's expedition, rejoined the Herald. They had searched the coast as far east as Dease's Inlet, and had there parted with the two whale boats; and had

Report of the boat expedition.

CHAP. XI.

at several points made deposits of provisions, but had not obtained the slightest intelligence of the missing adventurers. Mr. Shedden had been particularly active and daring, and had many times put his yacht in peril. And it is painful to add—though this is said in anticipation of the date—that he fell a victim to his excessive exertions during the noble service. He died eight or ten weeks after at Mazatlan.

Exertions of Mr. Shedden.

On the 1st of September the two ships and the yacht rendezvoused in Kotzebue Sound. Upwards of a fortnight was now spent in making an interesting exploration up the Buckland River, and in establishing friendly relations with the natives. The whole month of September was remarkably fine, the frost to the latest so light as not to arrest the streams, and strong winds generally blowing from the east. The Plover prepared to winter in Kotzebue Sound, with the view of making further researches, and received from her consort as much provisions as she could stow or take care of. And on the 29th of September, the Herald and the yacht weighed anchor and stood away for the south.

The Herald and the Plover's second exploration.

On the 10th of July 1850, the Herald again joined the Plover at Chamisso Island; and the two ships then set out together on another exploration. They proceeded northward till they sighted the pack ice, and then separated,—the Herald to return in quest of another and stronger expedition which had sailed from England, and which we shall afterwards have occasion to notice,—and the Plover to prosecute the search eastward along the coast. Commander Moore, by means of his boats, made minute examination of all the inlets between Icy Cape and Point Barrow; and he and his men suffered severely from exposure to cold; but they were entirely unsuccessful in the object of their search. The two ships again fell in with each other off Cape Lisburne, on the 13th of August; and Captain Kellett eventually gave full victualling to the Plover, ordered her to winter in Grantley Harbour and then, toward the close of

the open season, returned through Behring's Strait on his way to England. Thus, in October 1850, ended this first western searching expedition, without having thrown one ray of light on the probable fate of Sir John Franklin.

Sir John Richardson's overland expedition.

The second searching expedition was the overland one under the command of Sir John Richardson. In preparation for it, several boats, seven tons of pemmican, large quantities of other provisions and stores, five seamen, and fifteen sappers and miners, were embarked at Gravesend, on board of ships of the Hudson's Bay Company, on the 4th of June 1847. Sir John Richardson and Mr. Rae left Liverpool on the 25th of March 1848, and succeeded in overtaking Chief-Trader Bell, in charge of the boats and the men, at Methy Portage, on the 20th of June. The whole party reached the last portage on Slave River on the 15th of July; and there they divided into a seaward or exploring party under Sir John Richardson and Mr. Rae, and a landward or auxiliary party under Mr. Bell. The seaward party comprised three boats, with full loads of pemmican and eighteen men, and immediately embarked. The landward party comprised two boats and the stores for winter use, and were directed to make the best of their way to Great Bear Lake,—to coast round its western shores, and to establish a fishery at its west end, near the site of Fort Franklin, for the convenience of the seaward party in the event of its having to return up the Mackenzie,—to erect, at its north-eastern extremity, near the influx of the Dease River, suitable dwelling-houses and store-houses for winter quarters,—and, in the beginning of September, to despatch a well-tried Cree Indian and a native hunter to the banks of the Coppermine, there to hunt till the 20th of that month, and to keep a diligent out-look for the arrival of the boats.

Duties of the landward party.

Proceedings of the seaward party

The seaward party reached the sea on the 4th of August. On their way down they put ashore at Fort Good Hope, the lowest of the company's posts on the

CHAP. XI.

Mackenzie, three bags of pemmican for the use of any party from the Plover, or from Sir James Ross's ships, who might reach that establishment. At Point Separation, also, which forms the apex of the delta of the Mackenzie, they deposited one case of pemmican and a bottle of memoranda, and letters for the use of Sir John Franklin's party,—burying them in the circumference of a circle with a ten-feet radius, from the point of a broad arrow painted on a signal-post. And they afterwards did the same thing, or similar, on Whale Island, at the mouth of the Mackenzie,—on Point Toker, in lat. 69° 38′ N., and 132° 15′ W.,—on Cape Bathurst, the most northerly point between the Mackenzie and the Coppermine,—and on Cape Parry, at the east side of the entrance of Franklin Bay.

The depositing of provisions.

The explorers encountered head winds throughout most of their progress of eight hundred miles or upwards, from the exit of the Mackenzie to the mouth of the Coppermine; and they always kept near the shore, and landed at least twice a-day to cook, occasionally to hunt, often to look out from the high capes, and commonly at night to sleep on shore. Immediately off the efflux of the Mackenzie they had an interview with about three hundred Esquimaux; and at many subsequent points they communicated with other parties, who were assembled on headlands to hunt whales, or scattered along the coast in pursuit of rein-deer and water-fowl. The Esquimaux were confiding and frank; and all said that no ships had recently appeared on the coast; and those west of Cape Bathurst further said, that, during the preceding six weeks, they never saw any ice.

Interviews with the Esquimaux.

The explorers met floes of drift ice for the first time after rounding Cape Parry; but they encountered them more numerously as they approached Dolphin and Union Strait. On the 22d of August they had a strong gale from the west; and on the next morning they found themselves hemmed in by dense packs, extending as far

as the eye could reach. The weather had hitherto been genial; but now it passed into perpetual frost, with frequent snow-storms. The expedition, henceforth, got on with great difficulty; and when they had penetrated well up the west side of Coronation Gulf, they were engirdled by rigorous winter, and felt compelled to abandon their boats. They, therefore, were unable to fulfil a portion of their official instructions, which directed them to examine the western and southern shores of Wollaston Land, lying north-west of Coronation Gulf; and during eleven days, from the 2d till the 13th of September, they travelled by land, up the valley of the Coppermine, to their appointed winter-home at Fort Confidence, at the north-eastern extremity of the Great Bear Lake. Next summer Sir John Richardson returned to England.

Arrestment by the weather.

In his official report to the Secretary of the Admiralty, Sir John says—"In the voyage between the Mackenzie and Coppermine, I carefully executed their lordship's instructions with respect to the examination of the coast line, and became fully convinced that no ships had passed within view of the mainland. It is, indeed, nearly impossible that they could have done so unobserved by some of the numerous parties of Esquimaux on the look-out for whales. We were, moreover, informed by the Esquimaux of Back's Inlet, that the ice had been pressing on their shore nearly the whole summer; and its closely-packed condition when we left it, on the 4th of September, made it highly improbable that it would open for ship navigation later in the season.

Sir John Richardson's official report.

"I regretted extremely that the state of the ice prevented me from crossing to Wollaston Land, and thus completing in one season the whole scheme of their lordship's instructions. The opening between Wollaston and Victoria Lands has always appeared to me to possess great interest; for through it the flood-tide evidently sets into Coronation Gulf, diverging to the westward by the Dolphin and Union Strait, and to the eastward round

CHAP. XI.

Cape Alexander. By the fifth clause of Sir John Franklin's instructions, he is directed to steer south-westward from Cape Walker, which would lead him nearly in the direction of the strait in question. If Sir John found Barrow Strait as open as when Sir Edward Parry passed it on four previous occasions, I am convinced that (complying as exactly as he could with his instructions, and without looking into Wellington Sound, or other openings either to the south or north of Barrow Strait) he pushed directly west to Cape Walker, and from thence south-westwards. If so the ships were probably shut up on some of the passages between Victoria, Banks, and Wollaston Lands.

Conjecture respecting Sir John Franklin's position.

"Being apprehensive that the boats I left on the coast would be broken up by the Esquimaux, and being, moreover, of opinion that the examination of the opening in question might be safely and efficiently performed in the only remaining boat I had fit for the transport from Bear Lake to the Coppermine, I determined to entrust this important service to Mr. Rae, who volunteered, and whose ability and zeal in the cause I cannot too highly commend. He selected an excellent crew, all of them experienced voyageurs, and capable of finding their way back to Bear Lake without guides, should any unforeseen accident deprive them of their leader. In the month of March (1849), a sufficient supply of pemmican, and other necessary stores, with the equipments of the boat, were transported over the snow on dog-sledges, to a navigable part of the Kendall River, and left there under the charge of two men. As soon as the Dease broke up in June, Mr. Rae would follow with the boat the rest of the crew and a party of Indian hunters, and would descend the Coppermine River about the middle of July, at which time the sea generally begins to break up. He would then, as soon as possible, cross from Cape Krusenstern to Wollaston Land, and endeavour to penetrate to the northward, erecting signal-columns, and making deposits on conspicuous headlands,

Further exploration entrusted to Mr. Rae.

and especially on the north shore of Banks' Land, should he be fortunate enough to attain that coast. He was further instructed not to hazard the safety of his party by remaining too long on the north side of Dolphin and Union Strait, and to be guided in his movements by the season, the state of the ice, and such intelligence as he might obtain from the Esquimaux. He was also requested to engage one or more families of Indian hunters, to pass the summer of 1850 on the banks of the Coppermine River, to be ready to assist any party that may direct their course that way." Mr. Rae also repeated his elaborate and perilous mission in the summer of 1850.

The expedition under Sir James C. Ross.

The third and most important of the three searching expeditions of 1848 was the marine one conducted by Captain Sir James Clarke Ross. This comprised two superb ships, the Enterprise of 470 tons and seventy men, and the Investigator of 420 tons and seventy men, both as strong as they could be made, and furnished with every possible appliance. Each was provided with a screw-propelled steam-launch, 31½ feet long, and capable of an average speed of eleven miles an hour. Captain E. J. Bird was appointed to the command of the Investigator. The ships were instructed to proceed together to the head of Barrow's Strait; and the Enterprise, if possible, to push on to a wintering place about Winter Harbour or Banks' Land, while the Investigator should try to find harbourage somewhere about Garnier Bay or Cape Rennell. Parties were to go from the Enterprise along respectively the eastern and the western shores of Banks' Land, to cross Sir John Richardson's expedition on the mainland; and parties from the Investigator were to explore the coasts of North Somerset and Boothia.

Letter from Sir James C. Ross at Upernavick.

The expedition left the Thames on the 12th of May 1848, and entered Baffin's Bay early in July. A letter was written by Sir James Clarke Ross, from the Danish settlement of Upernavick on the 12th of July, stating that, if after passing a second winter at or near Port

CHAP. XI.

Leopold, he should get no intelligence of Sir John Franklin and his party, he would send the Investigator home to England, and prosecute a further search in the Enterprise alone. The Lords of the Admiralty took alarm at the possible, or even probable, consequences of this excessive heroism; and ordered the North Star store-ship, under command of Mr. James Saunders, to get ready with all speed to take out instructions and supplies to the expedition. Her prime object was to be the replenishing of the expedition's stock of provisions, and the enjoining of the Investigator not to return to England in the way Sir James C. Ross had indicated, but to remain in company with the Enterprise; and if the North Star should not succeed in promptly fulfilling this object, she was instructed to land the supplies at the farthest prominent point she could readily reach, and by all means to keep herself free from besetment in the ice, and to return before the close of the season. She sailed from the Thames on the 16th of May 1849, and *did not* return that season; and as she also became a subject of much public anxiety, this anticipatory notice of her has been given in order to prepare the way for a statement or two respecting her, which must be made at a future stage of our narrative.

Despatch of the North Star store-ship.

The Enterprise and the Investigator left Upernavik on the 13th of July 1848; and after running through an intricate archipelago near the mainland, they arrived, on the 20th, off Cape Shackleton, and there made fast to a grounded iceberg. They were joined there by the Lord Gambier whaling-ship, whose master informed them that, having run to the southward with the rest of the whalers, and having carefully examined the pack, he had found it all so close, compact, and heavy, as not to afford the slightest hope of any ship being able to find an opening through it, that season, to the west. He had, therefore, returned to the north, and expected that all the other whalers would soon follow him; and he had a very confident hope that he should get round the north

The Enterprise and the Investigator off Cape Shackleton.

end of the pack by the first week of August. But "the middle ice," as this great barrier along Baffin's Bay is called, has ever put the wits of the whale-fishers to the severest trial, and sometimes quite baffled and stultified them; and so, in some degree, did it do, on this occasion, to the master of the Lord Gambier. The earliest date at which it has been passed in any year is the 12th of June; the latest at which it has been found impassable is the 9th of September; and the average date of the first ship of the season passing it is about the 13th of July. But in 1848 it could be passed only with extreme difficulty, and only by far rounding to the north; and, as was afterwards ascertained, the first and almost only vessel which then got past it was the Prince of Wales of Hull, on the 6th of August, about lat. 75°.

State of the "middle ice."

Early on the morning of the 21st of July the expedition cast off from the iceberg, and began to tow their way through loose streams of ice toward some lanes of water in the distance. But both on this day and on the following few days, they made very slow progress, and were often in difficulty and embarrassment. On the morning of the 20th, when they were off the Three Islands of Baffin, in lat. 74° N., at the clearing away of a fog, they saw the Lord Gambier at some distance, standing under all sail to the southward,—the unusually bad state of the ice having overturned her master's hopes, and altered his purpose. They pursued their course northward amid much perplexity and vicissitude; and, though still fully expecting to bore their way through the pack, they were so excessively retarded by calms and barriers as soon to lose all hope of being able to accomplish any considerable part of their mission before the setting in of winter. They spared no exertions, but forced a progress, and even drove on at the expense of danger. On the 20th of August, during a strong breeze from the north-east, the ships, under all sail, bored through a moderately thick pack of ice, studded with perilously large masses; and they sustained severe

Difficult progress north of the Islands of Baffin

CHAP. XI.

shocks, yet, happily, did not receive any serious damage. They gained the open water on the afternoon of that day, in lat. 75½° N., and long. 68° W., and then steered direct for Pond's Bay. That, as is well known, is the grand scene of the whale-fishery; and thither the expedition went to inquire of any whaler's crew, who might have got across to the west, and also of the Esquimaux who annually visit that locality, whether they had seen anything of the missing adventurers.

Arrival at Pond's Bay.

On the 23d of August, they approached the shore about ten miles south of Pond's Bay, and saw the main pack so closely pressed home to the land, some three or four miles farther south, as to leave no room for ships or boats to pass. They next stood in to the bay, and paused within half a mile of the points on which the Esquimaux are known to have their summer residences; and they fired guns every half hour, and closely examined every part of the shore with their glasses, but did not get sight of a single human being. They then went slowly to the northward, and sometimes could not hold their own with the current, and always kept so close to the land that neither boats nor persons could escape their notice, yet still were unsuccessful.

On the 26th they arrived off Possession Bay, at the south side of the entrance of Lancaster Sound. A party there went ashore to search for traces of Sir John Franklin having touched at that general point of rendezvous; but they found nothing except a paper recording the visit of Sir Edward Parry in 1819. The expedition now sailed along the coast of Lancaster Sound, keeping close in shore, scrutinizing all the sea-board both from the deck and from the mast-head, and fully expecting every hour to see those of whom they were in search. Every day they threw overboard, from each ship, a cask containing papers of information of all their proceedings; and in every fog they periodically fired guns; and in every time of darkness they burned rockets and blue lights; and at all times, they kept the ships under such easy

Scrutiny of the coast of Lancaster Sound.

sail that any boat seeing the signals might have reached them. The drift of the information in the casks told the missing adventurers that no assistance could be given them at Pond's Bay, or anywhere else on the west coast of Baffin's Bay,—that the Enterprise and the Investigator were on their way to form a depôt of provisions at Port Leopold,—and that, if the adventurers would go on to that place, they would either find one of the ships there, or see, along with the provisions, a notice of where she might be found.

Information thrown over board in casks.

On the 1st of September, the expedition arrived off Cape York, at the east side of the entrance of Prince Regent's Inlet. A party was there sent ashore, under very difficult circumstances, to seek for Sir John Franklin's company, or for traces of them, and to set up a conspicuous mark, with a paper containing similar information to that in the casks. From Cape York the expedition stood over toward North-East Cape, till they came to the edge of a pack about fourteen miles broad, lying in the way to Leopold Island, and too dense for them to penetrate. They wished to get with all possible speed to Port Leopold to fulfil the promise made in their notices, and were glad to observe that the pack which now arrested them was still in motion, and might be expected soon to go to pieces under some favourable change. But, that no available time might be spent in inaction, they stood away, in the meantime, to the north shore of Barrow's Strait, to examine its numerous inlets, and to seek for a retreat harbour. They thoroughly explored Maxwell Bay, and several smaller indentations; and they got so near the entrance of Wellington Channel as to see that it was firmly and impenetrably barred from side to side by ice, which had not been broken up that season. Even Barrow's Strait was embarrassed by a greater quantity of ice than had ever before been seen in it at the same period of the year.

Examination of the north shore of Barrow's Strait.

They now stood to the south-west to seek for a harbour near Cape Rennell; but they found a heavy body

CHAP. XI.

of ice extending from the west of Cornwallis' Island, in a compact mass to Leopold Island. They coasted along this pack during stormy and foggy weather, and had difficulty during the nights in keeping the ships from being beset. With the thermometer every night at 15°, young ice formed so rapidly, and became so thick, as to defeat all their efforts to pass through some of even the looser streams. Yet, after several days of anxious and arduous toil, though the pack still lingered about Leopold Island and North-East Cape, they succeeded in getting through it, and entered the harbour of Port Leopold on the 11th of September; and had they not got in on that day, they would not have got in at all; for, on the following night the main pack came close home to the land, and completely sealed the mouth of the harbour.

Taking harbour at Port Leopold.

They were happy in having reached Port Leopold, both for their own sake, and for the sake of their mission. They had doubted whether the anchorage would be good, but they found it excellent, and saw at once that there could not be a better wintering-place for the Investigator. Nor could there have been a fitter locality for making a grand deposit of provisions, and preparing a temporary retreat for any of Sir John Franklin's company who might be entangled among the intricacies of the Archipelago. Port Leopold is situated at the junction of the four great channels of Lancaster Sound, Barrow's Strait, Wellington Channel, and Prince Regent's Inlet, and lies closely adjacent to any route which Sir John Franklin could have been likely to pursue in the event of his having had to retrogress from the vicinity of Cape Walker; so that a lodgement in it by the present expedition could scarcely escape the notice of any of Sir John's company who might happen to be proceeding from any part whatever of the Archipelago toward Baffin's Bay.

Advantageous position of Port Leopold.

An effort was made to bring the Enterprise out, with the view of her going westward to some harbour nearer Cape Walker. But she was irretrievably ice-bound. The

pack which closed the harbour's mouth never once afforded a chance for the egress of even a boat; and across the isthmus, as far as could be discerned from the neighbouring heights, the same extensive mass of heavy hummocky ice which repelled and limited the expedition's movements before entering, remained immoveable, and formed a firm barrier all the way over to the shore of North Somerset. Even if the Enterprise had got out, she could not have proceeded far, and, in all probability, would either have been perilously beset in the pack, or compelled to sail away from it to England. On the 12th of October, therefore, the two ships were laid fast in their wintering position, within 200 yards of each other.

Inability of the Enterprise to get further west.

The earliest days after entering the harbour were devoted to the landing of a good supply of provisions upon Whaler Point. In this service the steam-launch proved of most eminent value, not only carrying a large cargo herself, but towing two deeply-laden cutters at the rate of four or five knots, through the sheet of ice which then covered the harbour, and which no boat unaided by steam could have penetrated beyond her own length. The crews spent the dead of winter in a similar manner to those of former Arctic expeditions. But they probably felt much depressed by thinking on the fate of those whom they had been unsuccessfully seeking, and they had to contend against a rigorous cold, prolonged unusually far into the spring, so that, though they had more comforts, better appliances, and much richer fruits of experience than the crews of Sir Edward Parry's and Sir John Ross's ships, they were not by any means so healthy. During the winter a great many white foxes were taken alive in traps, and as they are well known to travel great distances in search of food, they were fitted with copper collars, containing engraved notices of the position of the ships and depôts of provisions, and then set at liberty, in the hope that they would be caught by the crews of the Erebus and the Terror.

Wintering at Port Leopold.

CHAP. XI.

In April and the early part of May short journeys were made to deposit small stores of provisions westward of Cape Clarence and southward of Cape Seppings. On the 15th of May, a party of thirteen, headed by Sir James C. Ross, and taking with them forty days' provision and a supply of clothes, blankets, and other necessaries on two sledges, started on an exploratory journey to the south. They were accompanied for five days by a fatigue party of nearly thirty, under Captain Bird. Their object was to penetrate as far as possible in the direction which Sir John Franklin was instructed first to pursue, and to make a close scrutiny of every bay and inlet in which any ships might have found shelter. They got on with difficulty, and did their work with much toil, yet went resolutely forward. The north shore of North Somerset trends slightly to the northward of west till it attains its highest latitude, the highest latitude of Continental America, a few miles beyond Cape Rennell; it thence trends slightly to the southward of west till it rounds Cape Bunny; and then it suddenly assumes a direction nearly due south. From high land adjacent to Cape Bunny, they obtained a very extensive view, and observed that all Wellington Channel on the north, and all the space between Cape Bunny and Cape Walker on the west, were occupied by very heavy hummocky ice, but that the frozen expanse southward, along the west flank of North Somerset, was smoother. They proceeded to the south, tracing all the indentations of the coast, and heroically enduring great exposure and fatigue, but not without the pain and delay of several of their number becoming useless from lameness and debility. They stopped on the 5th of June. They were then too weak to go farther, and had consumed more than half of their provisions; and they encamped for a day's rest preparatorily to their return.

Exploratory journey to the south.

View from the vicinity of Cape Bunny.

Their brave leader and two of the men, however, went onward to a vantage ground about eight or nine

CHAP. XI.

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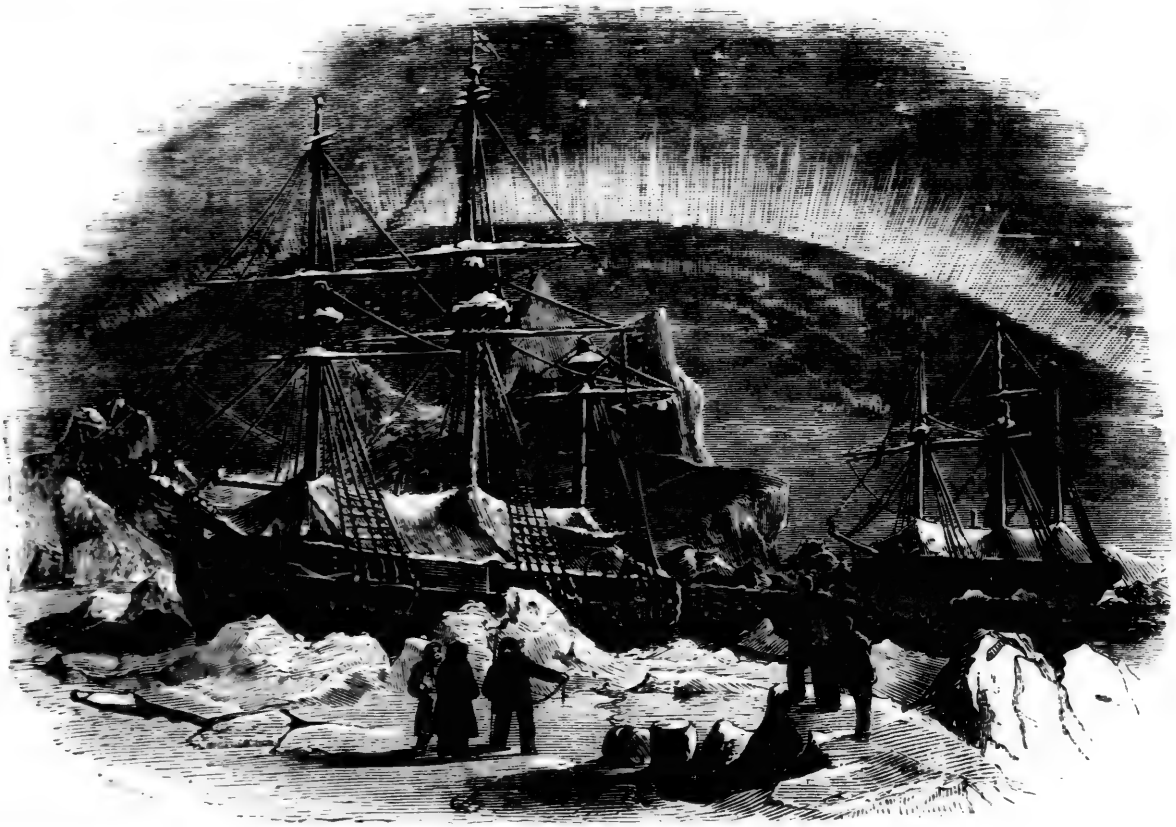
On the 12th of October the two ships were laid fast in their winter position.—Page 393.



THE ENTERPRISE AND INVESTIGATOR IN WINTER QUARTERS.

On the 12th of October the two ships were laid fast in their winter position.—Page 391.

miles distant. This extreme point of the journey is the western extremity of a small high peninsula situated in lat. 72° 38′ N., and long. 95° 40′ W. The atmosphere at the time was peculiarly clear, and would have carried the eye to land of any great elevation at the distance of 100 miles. But the most distant visible cape in the direction toward Boothia and Victoria Land was not farther off than fifty miles, and lay nearly due south. Several small bays and inlets intervened, and though perhaps not forming a continuous sweep of sea, they prove Prince Regent's Inlet at Cresswell and Brentford Bays to be separated from the western ocean by a very narrow isthmus. And that isthmus which is probably longish and like a neck, is a very distinct natural boundary between North Somerset and Boothia.

View from the extreme point of the journey.

The party resting at the encampment were not idle. Lieutenant M'Clintock, who headed them, took some magnetic observations which had great value on account of the near vicinity of the place to the Magnetic Pole. Two of the men pierced the ice and found it to be eight feet thick, and set in a stick for ascertaining the state of the tides; and all the others who could work erected a large cairn, into which was put a copper cylinder containing all requisite information for the guidance of any of Sir John Franklin's company who might journey along that coast. The time for expecting those missing ones there that season, on the supposition of their having abandoned their ships in the vicinity of Melville Island, had almost or altogether passed. The thaw had commenced, the suitable conditions for travelling were over, and the present explorers had at least the satisfaction of knowing that no wanderers from the Erebus and the Terror then lay unheeded or perishing on the coast of North Somerset.

State of things in North Somerset.

The explorers began their return journey on the 6th of June. They forced their way through various difficulties, and arrived at the ships on the 23rd. They were so worn and injured that every man of them, from

CHAP. XI.

some cause or other, went into the doctor's hands for two or three weeks. One of the assistant surgeons, too, had died; several men of both crews were severely ailing; and the general health was far from good.

Other exploratory journeys.

During the absence of the large exploring party in North Somerset, three small ones were despatched by Captain Bird in other directions. One, under the command of Lieutenant Barnard, went to the north shore of Barrow's Strait; another, under the command of Lieutenant Browne, went to the east shore of Prince Regent's Inlet; and the third, under the command of Lieutenant Robinson, went to the west shore of that inlet. These parties were a comparatively short time away; yet all—especially the last, who penetrated several miles beyond Fury Beach—suffered from snow-blindness, sprained ancles, and debility.

Preparations were now made for leaving Port Leopold. The season was far advanced, and a strong desire was felt to have the ships as soon as possible set free in order to push them on toward the west. But something farther was first done to extend the appliances of the place as a refuge for the missing adventurers. A house was built of the spare spars of the ships, and covered with such of the housing-cloths as could be wanted. The depôt of provisions and fuel was raised to a sufficient quantity to serve for a twelvemonth. And the Investigator's steam-launch was lengthened seven feet, and made a fine vessel, capable of conveying the whole of Sir John Franklin's party to the whale ships.

Lateness and severity of the season.

The crews were ill able to work the ships out of the harbour, and to set them once more before the breeze; but they went with a will to the task. The season was far advanced and exceedingly unpromising, and seemed clearly to demand the utmost promptitude and strenuousness of exertion. At a time when most other navigable parts of the Arctic Seas were open, Port Leopold continued as close as in the middle of winter. Not a foot of water was to be seen on the surface of the sur-

rounding ice, except only along the line of gravel about the harbour's mouth; and small prospect existed that any natural opening would occur. The crews were obliged to cut a way out with saws. All hands that were at all able went to work, and made a canal two miles in length, and sufficiently wide to let the ships pass outward to the adjacent sound. They did not complete this till the 15th of August, and then had the mortification to see that the ice to seaward remained, to all appearance, as firmly fixed as in the winter. But it was wasting away along the shores, and it soon broke up and gave promise of a navigable channel. The ships got out of the harbour on the 28th of August, exactly one fortnight less than a twelvemonth from the time when they entered it.

Extrication of the ships from Port Leopold.

They proceeded toward the north shore of Barrow's Strait, with the view of making further examination of Wellington Channel, and of scrutinizing the coasts and inlets westward to Melville Island. But they were arrested about twelve miles from the shore by fixed land-ice, which had remained unbroken since the previous season, and which appeared to extend away to the western horizon in an uniform heavy sheet. They were in a loose pack, struggling with blocks and streams as they best could, and they kept hovering about the spot which afforded the greatest probability of an opening. But on the 1st of September the loose pack was suddenly put in commotion by a strong wind, and it came down upon them and beset them. During two or three days the heavy masses at times severely squeezed them, and ridges of hummocks were thrown up all around them, and then the temperature fell nearly to zero, and congealed the whole body of ice into a solid mass. The crew of the Enterprise were unable, for some days, to unship the rudder, and when at last they released it, by means of the laborious operation of sawing away the hummocks which clove to the stern, they found it twisted and damaged; and at the same time the ship

They are beset and squeezed.

CHAP. XI.

was so much strained as to increase the leakage from three inches in a fortnight to fourteen inches in a day. The ice now remained for some days stationary. The lighter pieces had been so interlaced and imbricated by pressure as to form one entire sheet across the whole width of Barrow's Strait, and away eastward and westward to the horizon; and all the blocks and strata below them were so firmly cemented by the extreme severity of the temperature as to seem little likely to break up again that season. The ships appeared fixed for the winter, and who could tell whether they might not be exposed to a series of as terrific perils as those which so often menaced the Terror with destruction in her awful ice-voyage of 1836?

They seem fixed for the winter.

On the wind shifting to the west, the crews, with a mixture of hope and anxiety, beheld the whole body of ice beginning to drive to the eastward at the rate of eight or ten miles a day. They made all possible efforts to help themselves, but made them in vain, for no human power could have moved either of the ships a single inch. The field of ice which held them fast in its centre was more than fifty miles in circumference. It carried them along the south shore of Lancaster Sound, and then went down the west side of Baffin's Bay, till they were abreast of Pond's Bay, and there it threatened to precipitate them on a barrier of icebergs. But just in the very crisis of alarm it was rent as if by some unseen power into innumerable fragments, and set them almost miraculously free. The crews sprang from despair to hope, and from inaction to energy. All sail was set, and warps were run out from each quarter to work the ships past the heavy floes. The Investigator got into open water on the 24th and the Enterprise on the 25th. "It is impossible," said the brave commander, who had passed through so many hundreds of most terrible perils in both the Arctic and the Antarctic Seas, "it is impossible to convey any idea of the sensation we experienced when we found ourselves once

They experience a wonderful deliverance.

more at liberty, whilst many a heart poured forth its praises and thanksgivings to Almighty God for this unlooked-for deliverance." The harbours of Baffin's Bay were now all closed by the ice, and the path to the west was barred by the pack from which the ships had just been liberated. The expedition, therefore, had no alternative but to return to England, and they arrived off Scarborough on the 3d of November.

They return to England.

Thus ended the third of the government explorations in search of Sir John Franklin. But, in the meantime, within the sphere which it had swept, there were or had been going on some other operations which now require to be noticed. One of these was a government affair, and the rest were matters of private enterprise.

In 1848, the afflicted, devoted, noble-minded wife of Sir John Franklin, who then and since has won for herself the admiration of the civilized world, offered a reward of £2000, and in 1849 a reward of £3000, to any whale ships which, by departing from the usual fishing grounds, might discover or relieve all or part of the ships' companies of the Erebus and the Terror. The reward was to be cut down and proportioned to the degree of service rendered, and was to be distributed among the owners, masters, officers, and seamen on the same principle as if similar value of produce from the fishery had been obtained. The stimulus worked well on a few minds who could appreciate the nobleness of the motive, but proved not strong enough to affect the the grosser ones who looked only or mainly at the money. If the reward had been offered for exertion, irrespective of success, they too would no doubt have been moved.

Rewards offered by Lady Franklin.

On the 23d of march 1849, the government offered a reward of £20,000 "to such private ship, or by distribution among such private ships, or to any exploring party or parties, of any country, as might, in the judgment of the Board of Admiralty, have rendered efficient assistance to Sir John Franklin, his ships, or their crews, and

Reward offered by government.

CHAP. XI.

might have contributed directly to extricate them from the ice." This also was meant mainly for the whalers, but was not promulged till most of them had sailed, and had no adaptation to compensate owners and masters and crews proportionately to their losses on the fishery, and therefore did not produce any effect.

The whaling ship Truelove.

In the spring of 1849, the intrepid Mr. Parker, master of the whaling ship Truelove, carried out from Lady Franklin a supply of provisions and coals for the possible use of the missing expedition, and landed them on the conspicuous promontory of Cape Hay, on the south side of Lancaster Sound. At Pond's Bay Mr. Parker learned from Mr. Kerr, the master of the whaling ship Chieftian, that when that ship arrived there some Esquimaux came on board, and, without being questioned, drew a coarse representation of four ships beset in the ice in an inlet, and intimated that two of them had been on the west side of the inlet for four years, that the other two had been on the east side for one year, and that the inlet was distant a number of days' travelling which seemed to identify it with Prince Regent's Inlet. Some other particulars were added, all tending to show that the first two ships were the Erebus and the Terror, and the second two the Enterprise and the Investigator. Mr. Parker and Mr. Kerr felt strong hope from this story, and sailed away in their ships to verify it; but they were stopped by a solid barrier of ice, extending quite across Lancaster Sound, from Admiralty Inlet to Croker's Bay, and were obliged to return. The story soon got wing through Britain, and produced a powerful sensation. It was eagerly believed by fond hearts which had long throbbed with anguish for the absent, but was peremptorily or indignantly rejected by the cool-minded, who reflected that the alleged position of the beset ships was too near the whalers to have escaped their notice, and that Sir John Franklin could not possibly have lain four years in such a place without successfully attempting to send some in-

Fictitious report about Sir John Franklin.

telligence, by boat, by travelling party, by the Esquimaux, or otherwise, of his besetment.

The whaling ship Advice.

In 1849, Dr. Robert A. Goodsir, brother of the assistant surgeon of the Erebus, embarked in the whaling ship Advice of Dundee, on her annual trip to Baffin's Bay, in the hope that he might get early intelligence of the missing expedition. Mr. William Penney, the master of the Advice, was well known for enterprise and energy, and had made strenuous efforts in 1834 to assist Sir John Ross and his party, and now felt fervid and generous zeal to be useful in the affair of Sir John Franklin. They proceeded in the ordinary manner of a whaling cruise, yet penetrated into Lancaster Sound, and proposed to go as far as Prince Regent's Inlet, but were stopped on the 4th of August by a firm compact barrier, extending quite across, in crescentic outline, from Cape York on the south to the vicinity of Burnett's Inlet on the north. They were only seven days within sight of the shores of Lancaster Sound, and saw few other parts of them than such as had been closely scrutinized by the Enterprise and the Investigator; yet they searched them with a keen eye, and deposited on them several conspicuous notices, and on one occasion saw something on them which, for a few moments, electrified them with hope. This last must be told in Dr. Goodsir's own words.

"We had," says he, "run past the magnificent headland of Cape Byam Martin, and Possession Bay was opening to our view. It still continued beautifully clear, but every object within sight was transformed by refraction—a phenomenon, the effects of which so often attract the attention of the Arctic voyager. A long point of ice stretched out ahead. I was standing on the forecastle, examining with a telescope every part of the shore with an anxious eye, when, with a thrill of joy, I recognised a flag-post and ensign. I gazed earnestly at it; there could be no mistake; I could almost make out the waving of the flag. Without saying a word I

Incident at Possession Bay

CHAP. X.

put the glass into the hands of a man who was standing near me and told him to look at the point ahead. He did so, and, with a start, immediately exclaimed that he saw a signal flying. Delighted and overjoyed, I snatched the glass from his hands and again applied it to my eye. For an instant I saw the wished-for signal, but for an instant only—it faded, and again appeared, but now distorted into a broken and disjointed column, now into an upturned and inverted pyramid. The refraction had caused a hummocky piece of ice to assume these forms." The Advice, like each of the previous searching vessels, returned home without obtaining the slightest trace of the missing expedition.

Effect of refraction on the ice.

Thus did all these supplementary efforts to find Sir John Franklin, as well as the three primary and principal ones, prove utter failures. What was to be done now? What was to be thought? Many persons began to fear that the Erebus and the Terror had foundered in Baffin's Bay,—either overwhelmed by an iceberg, or otherwise sent so suddenly and bodily to the bottom, as to leave not a spar to record their fate. Others feared that they had been beset or crushed to destruction too far from land to allow the possibility of the crews reaching a place of safety in the boats or over the ice. And many more, though they did not exactly join in either of these opinions, concluded, from the length of time that the ships had been amissing, and from the fruitlessness of the searches which had been made for them, that, in some way or other, they were too surely lost. But the personal friends of the missing adventurers, the general intelligence of the nation, statesmen, the admiralty, and all persons well acquainted, from history or experience, with the Arctic Seas, still had hope, high hope, in many instances unabated hope.

Fears about Sir John Franklin's fate.

A summary loss of the crews of the Erebus and the Terror seemed eminently improbable. Some of the most competent judges even pronounced it impossible. The narrow seas and tumultuous ice-masses of the

Reasons for hope respecting him.

Northern Archipelago are perilous enough to ships, but afford ready means of escape to crews. "There are no heavy seas," as Dr. Scoresby afterwards remarked, "which could prevent escape from a shipwreck, nor could any imaginable catastrophe, by the ice of these regions, suddenly overwhelm two entire crews. For in this latter case the very ice which might destroy the discovery ships would yield a solid platform for refuge from the present danger, so as to give time for ulterior measures for improving, by deliberate consideration, the opportunity of escape." Nor, in the case of either shipwreck or ruinous besetment, or any other cause of the dispersion of the crews—short, at least, of the central parts of the Polar Sea—could it easily be supposed that, out of 138 men, the pick of Britain for strength and bravery, intimately acquainted with the character of the Arctic regions, and possessed of some of the choicest appliances of modern science, some small party would not have made their way, by boats or sledges, to some post of communication with the peopled world. The majority might have perished; but surely a few of the most vigorous would escape.

Facilities for escape from destructive ice.

Or if the ships were merely beset and not injured, the crews could scarcely be yet suffering serious detriment from the prolonged rigours of the climate, or from the exhaustion of their stores. They all knew well, and their leader perhaps more than any other living man, how to cope with the difficulties and dangers of the frozen regions, and all had great strength of will and high powers of both mental and physical endurance, and were in every way likely to perform as grand exploits of both active and passive bravery as any of their predecessors in Arctic adventure. But how wonderful had been the endurance of Barentz in Nova Zembla,—of the eight Englishmen who were left by mischance in Greenland in the year 1630,—of Franklin himself in his teriffic journeys on the American mainland,—of Sir John Ross and the crew of the Victory,—and of many more whose

Instances of great endurance in the Polar Regions.

CHAP. XI.

names have been crystallized by the rigours of the north into imperishable fame! And though the crews of the Erebus and the Terror had provisions with them for only three years, they could make these serve, by reduced allowance, for a somewhat longer period, and would, in all probability, obtain large additions to them by means of their guns. Sir John Richardson observed the shores of Wollaston Land and Victoria Land to abound in snow-geese and seals; Sir Edward Parry, during his stay at Winter Harbour, killed 3766 pounds weight of rein-deer, musk-oxen, and other game; Sir James C. Ross, during the winter which he spent at Port Leopold, killed about 4000 pounds weight of loons, dovekies, and other esculent animals; Mr. Rae, during the winter which he spent at Repulse Bay, supported all his party almost entirely on the produce of the chase, and at the same time had never any fuel except for mere cooking; and why might not Sir John Franklin, who knew the Arctic regions as well as any of them, and possessed as ample appliances as most, and carried with him the inventiveness of long and terrible experience, be able to eke out his three years' supplies to a sufficiency for five or even seven or eight years?

Natural supplies of food among the ice.

The probability seemed to be that the expedition had pushed far to the west, and were struggling to get forward. The weather during the three weeks following the day when they were last seen in Baffin's Bay was peculiarly favourable, and would allow them to make their way well through the Archipelago. They perhaps got so far, either that season or the next, as to think success attainable, or so far as to feel encouraged onward; and though they might be perilously hampered—scarcely able to extricate the ships at all during the short autumnal period of hope—they might believe, with Colonel Sabine and Baron Wrangell, on the evidence of the analogous case of the Asiatic side of the Arctic Ocean, that open water would be found on reaching a certain latitude, and might, in consequence, be induced to persevere.

Probable position of Sir John Franklin.

"By the case of Sir John Ross," remarked Dr. Scoresby, "we may account for their not improbable detention, whilst yet safe, through a period of four years; and if so, it must be obvious that a variety of causes, even *because* the expedition was safe, might explain a still further detention."

Demand for new searching expeditions.

These and such as these were the reasonings of multitudes. A cry loud and long, therefore, was raised for new searching expeditions. The brave adventurers, if alive, had increasing need every hour of the promptest possible supply of fuel and provisions; and they might be struggling with disease, enfeebled by privation, embarrassed by disaster, crippled and clogged by any one of not a few causes which a relieving expedition could mitigate or remove. The past searches had only shown, and shown most forcibly, the necessity for new ones. They had scrutinized known ground, and raised a high presumption that Sir John Franklin had gone to the unknown; but they had not obtained an atom of information about either his progress or his direction. He seemed certainly to be away beyond Cape Walker or beyond the Wellington Channel,—away in the wide west Polar Seas,—or among unknown lands in their frozen bosom; and thither must he be pursued; or at least on the borders of that great region, 700 or 800 miles in length, and several geographical degrees in breadth, must he be sought.

This demand becomes a topic of the day.

The demand for new searches became what is called a topic of the day. The United States took it up and met it; Russia took it up and met it; the Hudson's Bay Company, who wielded powers in reference to it as great as those of a great state, made most cordial response to it; and Britain treated it as a question of national humanity and national honour. Lady Franklin, in a pathetic appeal to the President of the United States, which kindled thousands of hearts on both sides of the Atlantic into action, remarked, "how noble a spectacle it would be to the world if three great nations, possessed

CHAP. XI.

of the widest empires on the face of the globe, were to unite their efforts in the truly Christian work of saving their perishing fellow-men from destruction." Sir Robert Inglis, in an introductory speech on the subject in the House of Commons, said, "he believed there was no precedent in history of one nation sending forth an expedition to rescue the lives of the subjects of another nation, and the honour of England required that efforts should be made by England herself to rescue her own countrymen." All parliament, and all the intelligence of the British empire held similar language. The newspaper press, of every grade and hue, was earnest and impatient for action. All the well-informed classes of the community desired a search for Sir John Franklin to the full as fervently as ever the impassioned few had desired a search for a north-west passage. Multitudes thought of the search with the same rough irreverence, yet with the same red-hot fervour, as if it had been an affair of the turf or the heath, and began to speak of it as "this most exciting of all hunts." And at last the head of the admiralty said in his place in parliament, "that he had never done the House of Commons or the country the injustice to suppose that expense would be an obstacle when the lives of their fellow-men were at stake, and that everything which human power could do should be done to save the lost expedition, while he was glad to say that His Imperial Majesty, the Emperor of Russia, the United States of America, and the Hudson's Bay Company, had most cordially entered into these views, and manifested the most earnest sympathy."

Speech on it in the House of Commons.

Three great divisions of search were adopted. These corresponded, in general sphere and character, to the three primary searching expeditions of 1848. One was marine by way of Behring's Strait, another was overland to the central northern coasts, and the third was marine by way of Baffin's Bay. We shall, therefore, treat them on the same general plan on which we

Three great divisions of new search.

treated the previous expeditions, noticing them in the order in which we have now named them, and narrating all we know of each before proceeding to the next. Some parts indeed of both the first and the second were done prior to the parliamentary and admiralty proceedings at which we have just glanced; but all will be best seen in their several connexions with the one great search when put together in the manner which we propose.

Despatch of the Enterprise and the Investigator to Behring's Strait.

The ships, Enterprise and Investigator, were refitted with all possible speed to go round South America and up to Behring's Strait. Captain Richard Collinson, C.B., was put in command of the Enterprise, and Commander R. S. M. M'Clure, who had served as first lieutenant of the Enterprise in the recent expedition under Sir James C. Ross, was put in command of the Investigator. The ships were provisioned for three years, and supplied with balloons, blasting appliances, ice-saws, and many other contrivances for aiding their movements and research. Each also was provided with a pointed piece of mechanism, about fourteen pounds in weight, attached by a tackle to the end of the bowsprit, suited to be worked from the deck, and capable, by means of a series of sudden falls, to break ice of any ordinary thickness, and open a passage through a floe or light pack. The ships are dull sailers, but were the only ones fit for the service which could be got promptly ready; and in order to expedite their progress, steamers were put in requisition to tow them in more than one part of their voyage, and particularly through the Magellan Strait, the Wellington Channel, and on to Valparaiso.

Instructions to their captains.

They sailed from Plymouth Sound on the 20th of January 1850. The captains had minute orders for their guidance on the way to Behring's Strait, and with reference to the previous expeditions of the Herald and the Plover, and were also furnished with memoranda, suggestions, and conditional instructions for their aid in the Polar Seas; but, with the exception of two or three general commands, bearing comprehensively on the

CHAP. XI.

grand object of their mission, they were left almost entirely to their own discretion after they should enter the ice. They were told to reap all the advantage they could from the experience of the Herald and the Plover,

The measures and precautions to be taken.

—to form a depôt or point of succour for any party to fall back upon,—to retain the Plover and get her replenished from the Herald, and send her a wintering and cruising on nearly her former ground till the autumn of 1853,—to keep the Enterprise and the Investigator steadily in each others company, and onward as far as safety would permit to the east,—to cultivate the friendship of the Esquimaux, and induce them to carry messages to the Hudson Bay Company's settlements,—to throw occasionally overboard tin cylinders containing information, and to use every precaution against getting into any position which might possibly hold them fast till their provisions should become exhausted. "We feel it unnecessary," said the Lords of the Admiralty to them in conclusion, "to give you more detailed instructions which might possibly embarrass you in a service of this description; and we have, therefore, only to repeat our perfect reliance on your judgment and resolution, both in doing all that is possible to relieve the missing ships, and in withdrawing in time when you come to the painful conclusion that your efforts are unavailing.

The paramount object to be pursued.

You will bear in mind that the object of the expedition is to obtain intelligence of, and to render assistance to, Sir John Franklin and his companions, and not for the purpose of geographical or scientific research; and we conclude these orders with an earnest hope that Providence may crown your efforts with success, and that they may be the means of expelling the gloom and uncertainty which now prevail respecting the missing expedition."

Both ships made a comparatively speedy passage to Behring's Strait. On the 29th of July the Enterprise reached the western end of the Aleutian Chain; on the 11th of August she reached the Island of St. Lawrence;

and on the 16th of August she fell in with the ice. But the weather was then so unfavourable, and the ice so thick, that Captain Collinson abandoned a purpose which he had formed to attempt to penetrate that season to Cape Bathurst. After several encounters with the ice, he reached Grantley Harbour, and there found the Plover preparing for winter quarters, and was next day joined by the Herald. On consulting with Captains Kellett and Moore, he determined, instead of wintering in the north, to proceed to Hong Kong, there to replenish his provisions, and not to set out again for the north till at least the first of April 1851. The Investigator was later in getting through the Pacific than the Enterprise, and probably did not reach the ice till about the beginning of August. Commander Moore writing at sea, in lat. 51° 26′ N., and long. 172° 35′ W., on the 20th of July, gave a sketch of his intended operations, and said that no apprehension need be entertained about his safety till the autumn of 1854, as he had on board full provisions of every kind for three years after the 1st of September, and intended to issue in lieu of the usual rations whatever food could be obtained by hunting parties from the ship.

Arrangements for the winter of 1850.

Dr. Rae, it will be remembered, was left by Sir John Richardson to attempt to overtake, in the summer of 1849, an unaccomplished part of the objects of the overland expedition of 1848. This had special reference to the examination of the coasts of Victoria Land and Wollaston Land; and now that Sir John Franklin's ships were believed to have certainly gone beyond Cape Walker, and to have probably bored their way southwestward to some position between that place and the mainland, this was deemed to be much more important than before. Early in 1850, instructions were despatched to Dr. Rae, by Governor Sir George Simpson, of the Hudson's Bay Company, requiring him, in the event of his explorations of 1849 having been unsuccessful, to organize another expedition for the summer of 1850.

Renewal of the overland search.

CHAP. XI.

This was to penetrate further, to range more widely, and to examine the coasts of Banks' Land, the coasts around Cape Walker, and the north coast of Victoria Land. Two small parties, at the same time, were to proceed westward on the mainland in the direction of Point Barrow; and one of these was to descend the Mackenzie, and explore the coast to the west of it, while the other was to pass on to the Colville River, and to descend that stream to the sea; and both were to induce the natives, by rewards and otherwise, to prosecute the search and spread intelligence in all directions. Dr. Rae was particularly instructed to keep an ample supply of provisions, clothing, ammunition, fishing-tackle, and other necessaries at Fort Good Hope, as that seemed an eminently probable retreat to which parties of the missing adventurers might try to force their way. But in most other matters, and especially in all the details of the expedition, he was left solely to his own discretion.

Divisions of overland exploration.

The expedition equipped by government for renewed search by way of Baffin's Bay and Lancaster Sound comprised two strong teak-built ships, the Resolute and the Assistance, and two powerful screw-propelled steam vessels, the Pioneer and the Intrepid. The ships had a tonnage, the one of 500, and the other of 430, and were alike strong, commodious, elegant, and admirably appurtenanced. The steam vessels had strength and adaptation, not only for towing the ships in open channels, but for conflicting with the perils of the Polar Seas, and forcing a passage through small floes and thin packs of ice. Captain H. T. Austin was put in command of the Resolute, Captain E. Ommanney of the Assistance, and Lieutenant Sherard Osborne of the Pioneer. Multitudes of officers nobly vied as volunteers to obtain the subordinate appointments; and some of the most experienced whale-fishers were obtained for the forecastle. The instructions given were similar in scope and spirit to those of the Behring's Strait expedition, and differed

New public expedition by way of Baffin's Bay.

chiefly in adaptation to the different route. The expedition sailed in the spring of 1850.

Expedition under Sir John Ross

An expedition, under the command of the veteran Sir John Ross, was equipped by a public subscription, toward which the Hudson's Bay Company contributed L.500. This consisted of a schooner-rigged vessel of 120 tons, which Sir John called the Felix, in honour of his late patriotic friend Sir Felix Booth, and of a small tender of twelve tons, called the Mary. They were provisioned for eighteen months; and they set sail in the latter part of April. Sir John was in excellent spirits, and as full of fire and daring as in his younger years; and he obtained an old, expert, Esquimaux interpreter, and possessed fair promise of being able to achieve fully as much in his little vessels as if he had been in command of the best government ships. His plan was to proceed as quickly as he could to Barrow's Strait, to commence operations at Cape Hotham, on the west side of the entrance of Wellington Channel, to examine all the headlands thence to Banks' Land, and then, if still unsuccessful, to leave the Mary there as a vessel of retreat, and to push the search in the Felix alone during another year.

Expedition under Mr. Penney

An expedition also was equipped at the instance of the devoted Lady Franklin,—wholly by her own zeal, and mainly at her own expense. This was put under the command of Mr. Penney, the quondam master of the Advice whale ship, and consisted of a fine ship of 225 tons, affectingly called the Lady Franklin, and a new clipper-brig of 120 tons, named the Sophia, in honour of Miss Sophia Cracroft, the intimate companion of Lady Franklin, and a most anxious mourner after the missing adventurers. The larger vessel was fitted up at Aberdeen, and the smaller one at Dundee,—both with great celerity, and in a style of the best possible adaptation to an Arctic voyage; and they also sailed in the spring of 1850. Their proposed plan of procedure was somewhat coincident with that of the government expedition, yet en-

CHAP. XI.

tirely independent, except in the way of co-operation or mutual aid, and would be much controlled or modified by circumstances.

Another expedition, supplementary to the preceding, was equipped at the instance of Lady Franklin. She herself defrayed about two-thirds of the cost of it, by means of selling out of the funds all the money which she could legally touch; and her friends defrayed the rest. The only vessel was the Prince Albert, a schooner-rigged craft of 90 tons, but as fine a little structure as ever "walked the waters," and strengthened and fitted in the most artistic way for buffeting the perils of the Arctic Seas. She was commanded by Commander Charles C. Forsyth of the Royal Navy, and served in a variety of capacities, most laboriously and dexterously, by W. Parker Snow, Esq.,—both volunteers, who wished no compensation but the honour of the enterprise. The object was to examine the shores of Prince Regent's Inlet and the Gulf of Boothia, and to send out travelling parties to explore the west side of the land of Boothia down to Dease and Simpson's Strait. At the time when Sir John Franklin sailed, a belief was general that Boothia was an island, and that Prince Regent's Inlet communicated with the Polar Sea through Dease and Simpson's Strait; so that, in the event of his being baffled to find a north-west passage by way of Cape Walker or up Wellington Channel, he would very probably enter Prince Regent's Inlet with the view of passing round the south of Boothia. Hence the present expedition. The Prince Albert sailed from Aberdeen on the 5th of June.

The expedition of the Prince Albert.

The American expedition.

An expedition also was equipped in America. This was got up mainly by the exertions and at the cost of Henry Grinnel, Esq., a merchant of New York, but was put in order and sent forth by the United States Board of Administration for Maritime Affairs. It consisted of two vessels, the Advance and the Rescue, of respectively 125 and 95 tons; and was put under the command of

Lieutenant De Haven, who had served in the United States' exploring expedition, under Commodore Wilkes, in the Antarctic Seas. It sailed from New York on the 24th of May, and was accompanied for two days in his yacht by Mr. Grinnell. Its object was to push promptly forward, in any way it could, in the direction of Melville Island and Banks' Land,—to winter wherever it might happen to stick fast, in the pack or out of the pack,—and to move on and make search as long as it might be able, in any direction which should offer most promise of success—reckless at once of nice precautions and of all ordinary obstacles.

Bold determination of the American searchers.

The North Star transport which left England in 1849, to convey stores to the expedition under Sir James C. Ross, may in some sense be regarded likewise as one of the exploring ships of 1850. At all events, she entirely failed to do the particular work for which she was despatched, and yet almost mingled in the early movements of the new Baffin's Bay expeditions. She became beset in Melville Bay on the 29th of July 1849, and gradually drifted till the 26th of September; and being then abreast of Wolstenhome Sound, and able to bore a way through the loosened ice, she pressed up to the head of that Sound, and took a position there for the winter. She lost four of her crew during the dismal seclusion of the Arctic night, but not from causes attributable to the climate; and she found a large proportion of the preserved meats she had brought from England to be of bad quality, and was obliged to put the surviving crew upon two-thirds allowance. She got out of Wolstenhome Sound on the 1st of August 1850, passed through "the middle ice" in the centre of Ross's Bay, reached Possession Bay on the evening of the 8th, left despatches there, and arrived at Port Leopold on the 13th. She found that harbour full of ice, and was not able to land stores at it, and with great difficulty communicated with the shore by boat to leave a notice of her visit. She next went toward Port Bowen,

The North Star at Port Leopold.

CHAP. XI.

but found that place entirely blocked with ice; and then stretched across out of the inlet, and spoke first the Lady Franklin, and afterwards the Felix, and got intelligence from them of the great searching operations of that season. She next proceeded to Navy Board Inlet; and there, on the mainland, behind Wollaston Island, she put ashore her surplus stores of fuel and provisions. She had suddenly to scud away before a gale, and ran careeringly out of mid channel of Lancaster Sound; and on the 28th of September she arrived in Scotland.

Return of the North Star to Britain.

The several expeditions of 1850 up Baffin's Bay encountered enormous difficulties from "the middle ice" and the Melville Bay barrier. Though the ships sailed from widely different points at widely different periods, they all more or less got into view of one another, and most were for some time closely in one another's company. All were at several times arrested or beset; and the best and largest spent five weeks in effecting a northward distance of thirty miles. The perils which they braved were only a degree or two less terrible than those of the whale ships in Melville Bay in 1830, or those of the Terror in Hudson's Bay in 1836. The crews of the smaller vessels were repeatedly in preparation, with their bundles and loose stores, to leap on the ice from expected shipwreck, and to betake themselves to sledging or foot-travelling for escape to the land. The environment, with massive towering icebergs, was sometimes so complete as to exclude every perceptible outlet, sometimes so close as almost to rub the ships, and sometimes so unsteady or whirling as to threaten overwhelming somersets. Some whaling-ships which got early to the north, though commanded by the most experienced masters, and manned by the most select crews, turned about and sailed back to the south, fully believing the penetration of Melville Bay that season to be either an impossibility, or practicable only at fearful hazards. The expedition ships, however, were little, if at all, daunted, conscious of possessing higher powers, and re-

Dangers of the discovery ships in Melville Bay.

CHAP. XI.

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ICEBERGS.

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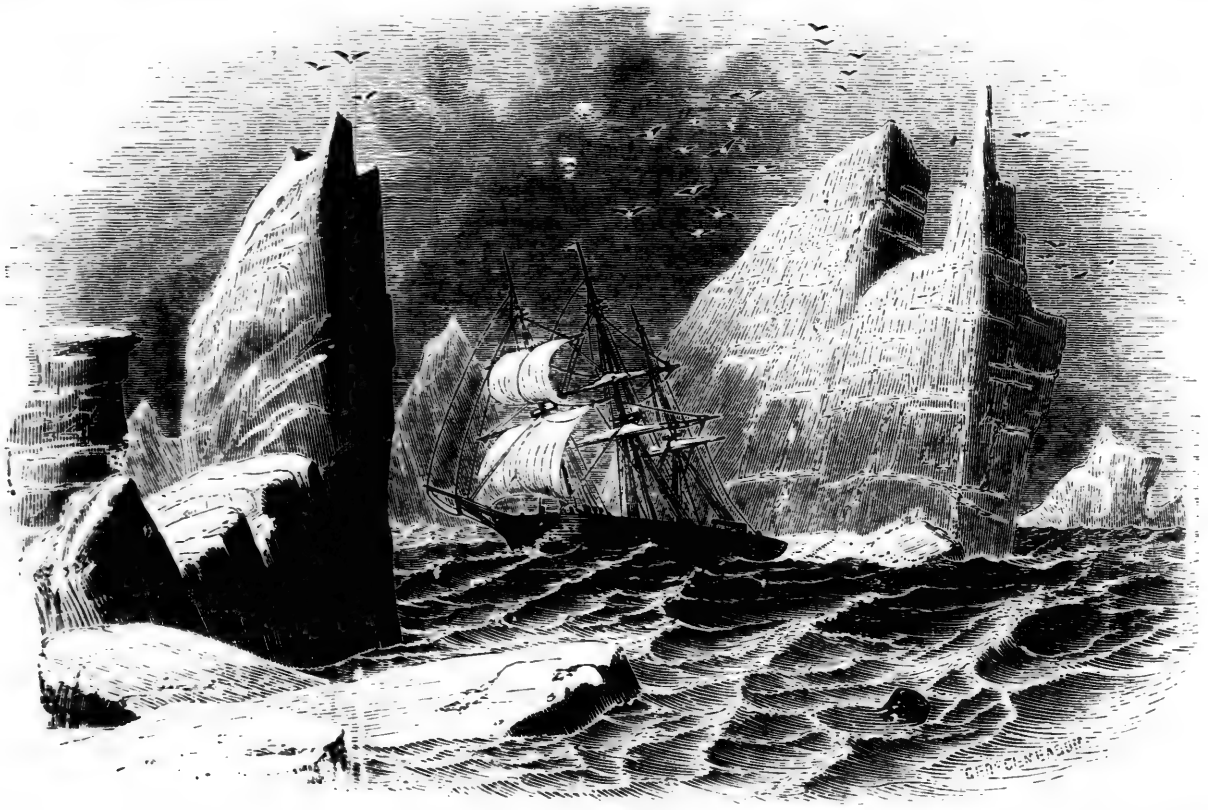

ICEBERGS.

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solutely determined to get on. The means which they used for forcing their way comprised all the known methods of boring, tracking, and cutting,—and were sometimes effected with prodigious labour and indomitable perseverance; and they comprised, also, in the case of the government expedition, the smashing of all thin floes, and sometimes the perilous assault of thick ones, by the impetus of the steamers. The smaller vessels of the private expeditions might have seemed incompetent for such rough work; but though ill able to attack, they were well able to run and manœuvre; and on the average of the voyage through the ice, they were found to be fully as safe, and more than fully as manageable, as the large ships.

The working of the smaller vessels.

The little Prince Albert, in particular, did wonders; and on one occasion, disdaining to lie ice-fast, she made a daring attack upon a neck of ice which lay between her and an open piece of water. This is so graphically told by Mr. Snow in his interesting published journal, that we must make ourselves debtors to him for the passage. "As the wind was blowing right down upon it, and pretty fresh," says he, "it was determined by Captain Forsyth boldly to try and break through the impediment by forcing the ship on it under a press of canvass. Accordingly all sail was set, and the ship was steered direct for the narrowest and most broken part of the neck. As this was the first and only time the Prince Albert was made to come direct upon the ice to break it with the force she would derive from a press of sail, we were all anxious to see how she would stand it; and right well did she bear the test. The two mates were aloft in the crow's nest to *con* the vessel. I was standing on the extreme point of her bow, and holding on by the forestay to direct her movement when immediately upon the ice; and Captain Forsyth was by the side of the helmsman. Every man was at some particular station, and ready to perform anything that was instantly required of him. Cook and steward were also on deck;

Exploit of the Prince Albert.

CHAP. XI.

and throughout the ship an almost breathless anxiety prevailed; for it must be remembered, it was not a large and powerful ship, but a small and comparatively fragile one, that was now about to try of her own accord, and with her own strength, to break a piece of ice some feet thick, though not very broad. On either side of her were heavy floes and sconce pieces; and it required the greatest nicety in guiding her, that she might, in her strongest part—the bow—hit the precise spot where the neck was weakest, and not come upon any other part where she could do nothing but severely injure herself. On she came, at the rate of full five miles per hour, gaining, as she proceeded, increased impetus, until she rushed towards it with a speed of at least eight miles in the hour. The distance from the neck was about a mile, and the breeze blew steadily upon it. The weakest and narrowest part was that close to the starboard floe, and to that our eyes were all directed. 'Port! starboard! So—o— steady!' was every now and then bawled out with stentorian lungs from aloft, and as energetically and powerfully repeated by the captain below to the man at the wheel. Presently she came close to—she was almost upon it—a mistaken hail from aloft would have put her helm aport, and sent her crushing upon the heavy floe. I heard the order 'aport!' and, before it had been repeated, shouted loudly, with the men around me, who also saw the mistake, 'starboard! starboard! hard a starboard!' and the next instant, with a tremendous blow, that for the moment made her rebound and tremble, she struck the ice in the exact point, and caused it to rend apart in several fragments. Ice-poles and boat-hooks were immediately in request; and myself and half a dozen men sprang instantly over the bows, working with hands and feet, and with all our might, in removing the broken pieces by pushing them ahead of the vessel; in which labour she herself materially aided us by her own power pressing upon them. In a moment or two it was effected; and throwing ourselves aboard

Critical nature of the exploit

Success of the exploit.

again like so many wild cats, we prepared for the next encounter. This, however, proved nothing like the other. The first blow sent the whole of it flying in all directions; and the little Prince, as if in haughty disdain, passed through without once stopping, pushing aside the pieces as they came against her. In another moment or two we were in a larger sheet of water, though, to our disappointment, blocked up at the extreme end by small bergs and huge hummocks, which latter had, apparently, been thus thrown up in consequence of some late severe squeeze there. We were, therefore, again obliged to make fast."

Disappointment at the result.

The steamers, for a long way, expedited the progress, not only of the government ships, but also of the Felix and the Prince Albert, by towing them through traversable masses of loose ice, and by forcing a passage through impediments. One of the scenes which occurred in this part of the voyage may be quoted from Mr. Snow to illustrate its arduousness and novelty. "We came to a heavy *nip*," says he, "and all the vessels had to be made fast to a floe until a passage could be cleared. The Pioneer, immediately on casting off the Resolute's towrope, was directed to dash at the impediment under full power. This she did boldly and fearlessly,—rushing, stem on, and fairly digging her bows into it in a most remarkable manner. Backing instantly astern, and then again going ahead, she performed the same manœuvre, fairly lifting herself up on end like a prancing war-horse. By this time the nip was too heavy to be so broken, though both the steamers had previously cleared many similar impediments in that manner. It was now, however, necessary to resort to other means; and, accordingly, parties from every ship were sent on the ice to assist in blowing it up, and removing the fragments as they got loosened. The same plan as that, I believe, adopted in blasting rocks, was here pursued. Powder was sunk to a certain depth, a slow match applied, and at a given signal ignited. Due time was allowed, and

Elaborate forcing through the ice.

CHAP. XI.

then the enormous masses would be seen in convulsive movement, as though shaken by a volcanic eruption, until piece upon piece was sent in the air, and the larger bodies were completely rent into innumerable fragments. The steamers then darted forward, and with warps dragged out the immense blocks that had been thus dis-[illegible]ered. Several efforts had to be made by blasting and forcing the ice before a passage could be cleared; and during the whole time it was quite a pleasure to see how both officers and men worked at it. Captain Austin himself was as busy as any one,—directing, and handling, and unceasingly working. Neither falls, nor a rough knock now and then, did he care for; but maintained his post on the floes and pieces of ice until he had made a passage for his own ships, and the two little ones he had so kindly taken in charge."

Alacrity and zeal of the crews.

On the 14th of August, the Lady Franklin and the Sophia were for a little while in company with the other ships, and then, amidst deafening cheers, stood away under all sail to the west. On the following night, when the little fleet were off Cape Dudley Digges, the Intrepid, the Assistance, and the Felix, parted company to make a search in Wolstenhome Sound. On the 15th, the Pioneer, the Resolute, and the Prince Albert, were quite into the "North Water," away from the ice; and on the 16th, Captain Austin announced his intention to call at Pond's Bay and Possession Bay, expressed a wish that the Prince Albert would examine the south shore of Lancaster Sound from Cape Hay onward, and stated that the Intrepid and the Assistance would examine the north shore, and come to a rendezvous with the Resolute somewhere about the mouth of Wellington Channel.

Plan of procedure up Lancaster Sound.

Early on the 21st of August, the Prince Albert arrived off Port Leopold. A landing was effected with great difficulty in a gutta percha boat, and could not have been effected at all in any ordinary boat. The house constructed by Sir James C. Ross was found much rent in several places on the top and at the sides, but other-

wise in excellent order, and quite fit to be a temporary retreat to any forlorn or castaway Arctic adventurers. The stores looked most abundant and in prime condition. And the steam-launch seemed a noble little vessel, in which a brave-hearted party might venture anywhere, and was so placed that she could very easily be run into the sea. But not a trace was found of the visit of any wanderer from the Erebus and the Terror.

The Prince Albert in Prince Regent's Inlet.

The Prince Albert now stood away down Prince Regent's Inlet; and toward evening, when she was gliding past the ice off Batty Bay, her crew were startled for a moment into a thrill of hope. The men on deck thought they heard a gun fired on shore; the officers ran to scrutinize the land through their glasses aloft; the vessel was steered closer to the bay; the howitzer was cleared away and fired; but not the slightest sign of life could be seen,—not the faintest answering sound was heard. The supposed shot had been merely the falling of a piece of rock, or the collision of some heavy masses of ice.

Next morning the vessel was off Fury Beach, and in a thick fog; and when the fog cleared away, she proved to be in a bight of the ice, within a few yards of a continuous, heavy, hummocky expanse, which contained not, as far as it could be seen from the crow's nest, one pool or crack, or the slightest promise of an opening. The officers examined this long and anxiously, and were forced to conclude that any attempt to penetrate it that season would be utterly impracticable. They gloomily but irresistibly felt the specific object of their voyage, the examination of the shores of Boothia, to be defeated; and saw at once that they must turn about and lose little time in returning to Britain. But they resolved first to look at some of the most accessible shores and headlands about the throat of Barrow's Strait, and a brief way up Wellington Channel.

Defeat of the object of her voyage.

During twenty-four hours Mr. Snow, with a small boat party, made a romantic land-search of the coast around

CHAP. XI.

Batty Bay, and on to Port Leopold; and he found the latter place far more blocked up than on the 21st, and did not get away from it without enormous labour and difficulty. When he again reached his vessel they had to stand well away to avoid collision with a heavy stream of ice which filled a large portion of the adjacent sounds.

The Prince Albert in Barrow's Strait.

When they got a little way into Barrow's Strait, they saw coming right toward them a schooner, which they first supposed to be the Felix, but afterwards found to be the Advance. On the morning of the 24th, they were standing across to Cape Hurd under a clear sky and with a moderate breeze, while a heavy pack was visible from the crow's nest, extending all along the coast of North Somerset from outside of Leopold Island on the east, to the vicinity of Cape Rennell, where it appeared to enlarge, and began to take a curved direction toward Cape Hotham. The Advance was still behind them; the Lady Franklin and the Sophia were to windward, struggling along shore in the vicinity of Radstock Bay; and, as the day wore on, three more ships were observed at the mouth of Wellington Channel. The Prince Albert's own voyage outward had been remarkable,—the last of the expedition vessels to leave Britain, and the first to reach Barrow's Strait; but since she was now retrograding, the appearance of the others so far to the west, so soon after their long and discouraging besetment in Melville Bay, was vastly more cheering, and must have breathed hope and invigoration into the hearts of their brave crews.

Hopeful progress of the other ships.

An hour before noon of the 25th, when the Prince Albert was off Cape Spencer, her officers saw that she must stop. An extensive pack was then a short distance ahead, broken only by a few lanes of water, through which the ships in advance had evidently passed; and the wind was blowing in a direction, happily, quite favourable for carrying these ships rapidly on to the regions of most desirable search, but fitted also to make a prompt closure of the pack against any return that

season to the east. If the Prince Albert should now go forward more than a mile or two, she might be suddenly caught by the ice, and helplessly and uselessly shut up for the winter. At noon, therefore, she bore up when about midway between Cape Spencer and Point Innes; and then Mr. Snow went to the mast-head to take a last view of the position and seeming prospects of the several exploring vessels. CHAP. XI.

Last view of the exploring ships.

Cape Hotham was seen to the west enveloped in a thick haze. The Assistance appeared some distance to the north-east of it, endeavouring to get to it, seemingly either in a hole of water or along a lane. The Lady Franklin was not far from the Assistance, but probably about mid-channel, either working toward Cape Hotham, or trying to get right away to the west. The Sophia, also under all sail, was some distance astern of the Lady Franklin, and more to the east. The Rescue was still farther to the east, considerably in shore, and apparently beset. All these vessels were among heavy ice. The Advance could not be seen, but was supposed to be behind one of the points of land; and she was afterwards spoken in the vicinity of Cape Riley, close in shore, fast to an iceberg. The Intrepid, too, was not then visible, but had been seen in the morning. All Wellington Channel, as far as the eye could reach, was filled with one solid pack, broken only here and there by a small lane. Some high land, appearing dim and filmy from haze and distance, was seen toward Cape Bowden, trending apparently to the north-west. One heavy pack extended athwart all the south-west, and looked to be impenetrable. The only clear water visible lay immediately around the Prince Albert, and backward along the way by which she had come.

State of Wellington Channel.

On the same day, soon after the Prince Albert had turned her bow homeward, a flag-staff, like a signal-post, was observed on Cape Riley. The officers, supposing this to have been set up by a party from some one of the exploration ships, sent a boat ashore to ascertain

CHAP. XI.

what it meant. A cylinder was found at the flag-staff, containing a notice that the officers of the Assistance and the Intrepid had landed on Cape Riley on the 23d, that they had collected there distinct traces of an encampment by some party belonging to the royal navy of Britain, that they had found traces of the same party on Beechy Island, and that they purposed to proceed thence to Cape Hotham and Cape Walker in search of further traces. Here at last, then, were vestiges of Sir John Franklin and his companions. What they were was not said; but they at least possessed sufficient distinctness, and involved sufficient evidence, to induce the officers who had found them to bear right away to the west. The little boat party from the Prince Albert were too zealous to be satisfied with the mere notice. They looked eagerly around, and soon observed five spots on which tents seemed to have been fixed, and also obtained a piece of navy rope, a piece of canvass, a chip of timber, and a number of meat-bones. These, all poor and pitiful though they might seem of themselves, seemed to throw so perceptible a light on at least the commencement of the mystery of the Franklin expedition, that they were esteemed a countlessly precious prize. How fortunate that the Prince Albert did not go down Lancaster Sound, till they were got, and how relieving to the oppressed hearts of thousands of mourners, that they could be so promptly brought to Britain!

Traces of Sir John Franklin on Cape Riley.

Relics from Cape Riley sent to the Admiralty.

The Prince Albert arrived at Aberdeen on the 1st of October; and the relics from Cape Riley were speedily sent to the Admiralty, and subjected there to a rigorous scrutiny. The piece of rope was found to be of navy-yard manufacture, not later than 1841,—the piece of canvass to have a corresponding character,—the chip of timber to have a recent cut with seemingly an European axe,—the meat-bones to bear exactly the marks of a ship's provisions used about five years back,—the reported tent-marks to be nearly such as might be expected from a party making a long stay for the purpose

RELICS OF THE FRANKLIN EXPEDITION.

1. The three graves at Cape [illegible].
2. Directing post set up by our [illegible] navigators.
3. Canoe from the Terror.
4. Logs mast, and [illegible].
5. The smith's anvil block.
6. Mess-tins and spoons left on the Erebus at Cape [illegible].

CHAP. XI.

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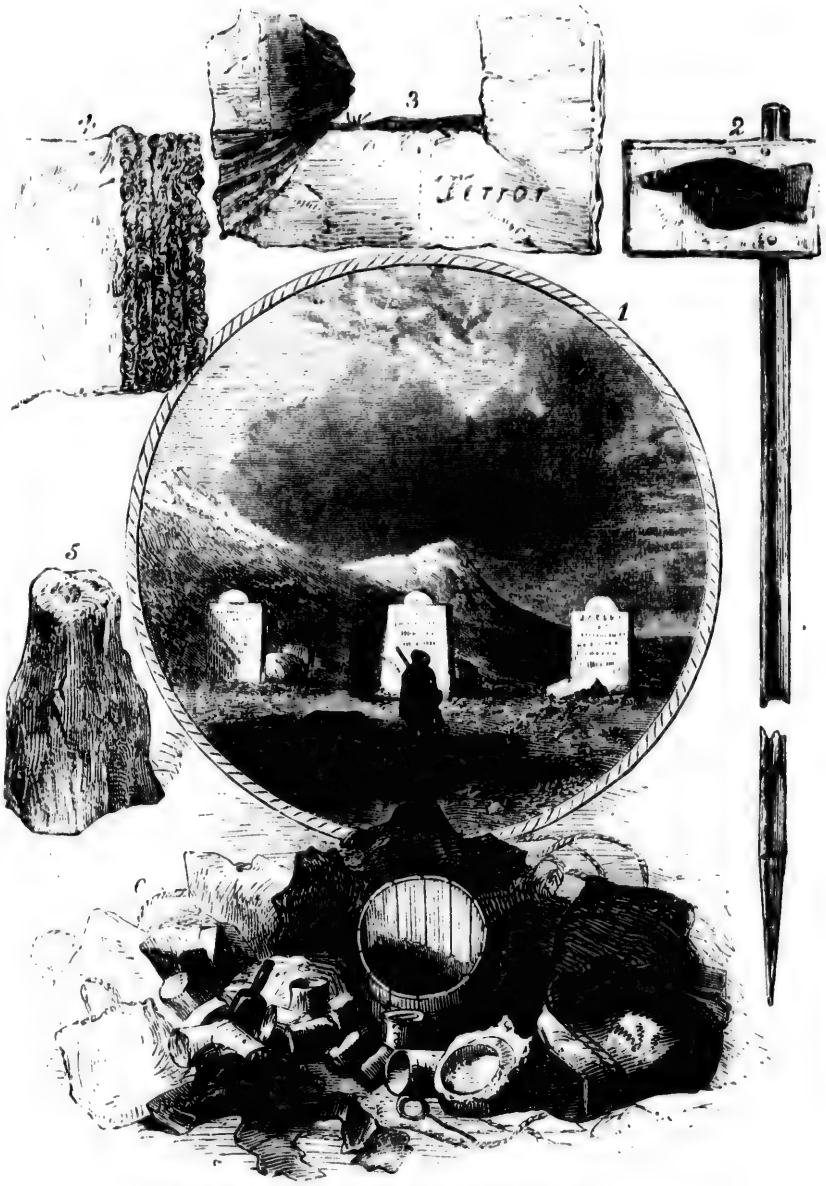


RELICS OF THE FRANKLIN EXPEDITION.

Page 420.

1. The three graves at Cape Riley.
2. Direction post set up by the missing navigators.
3. Canvas from the Terror.
4. Rope mat, unfinished.
5. The smith's anvil block.
6. Meat cans and sacks left by the Erebus at Cape Riley.

of scientific observation,—and the entire circumstances of the traces on Cape Riley unaccountable by any known or supposable event, except a prolonged visit in 1845 or 1846 by a party from the Erebus and the Terror.

Concluding thoughts.

CHAPTER XII.

Expeditions of 1850-51-52 *in Search of Sir John Franklin.*

Squadrons Liberated from Ice—Sledging Parties sent out—Long Journeys on Foot—Discovery of Victoria Channel—The American Expedition—Sir J. Ross's Theory Respecting Franklin's Fate—Captain Austin's Opinion—Return of the Squadron—Squadron under Sir E. Belcher—Prince Albert refitted and sent to Prince Regent's Inlet—Details of Prince Albert's Voyage and Return to England.

CHAP. XII.

The traces of Sir John Franklin's party.

THE traces of the encampment of Sir John Franklin's party, at the mouth of Wellington Channel, in the winter of 1845-6, proved very ample, and perfectly conclusive. They comprised scraps of paper, fragments of clothing, bits of wood and metal, stacks of empty meat-tins, remains of observatory, carpenter's shop, and armourer's forge, and—most striking of all—three graves, bearing the names of two men of the Erebus and one of the Terror. All showed that the encampment had been of long continuance, and in full organization; and some seemed to indicate that it had been hurriedly broken up, —that probably a great and unexpected disruption of the ice, in the summer of 1846, had suddenly summoned the crews to resume progress in the ships.

Efforts of the squadron to go west.

On the 8th of September, 1850, most of the searching vessels got once more free from the ice, and unfurled their sails in open water, along the south side of Cornwallis Island. They bore boldly away, in the hope of penetrating well to the west, but were soon arrested by a vast floe, which extended from the south-west end of Griffith Island, as far as the eye could reach. They kept close to this, and strove with it, from the 10th till

the 13th, and then began again to get forward; yet proceeded only a short distance, amid great embarrassment and severe exertion, when they were compelled to stick fast for the winter. The Government ships were locked up in the ice between Cornwallis Island and Griffith Island; and all the others were sufficiently near to admit of easy communication among the whole squadron.

Arrangements for explorations by land.

Arrangements were early made for performing exploratory journeys with sledges in spring. Captain Austin superintended those for the lands and islands along what may be called Parry's Strait,—the band of sea westward from Barrow's Strait to Melville Island and the north end of Bank's Land; and Captain Penny undertook to conduct the search of Wellington Channel. All parties were hearty, and went through their preparations with alacrity and high hope. Sledges were sent out, before the severest period of the winter, to place provisions in depot for the use of the explorers in spring; and exercises of walking and sledge-dragging were afterwards, in all favourable weather, practised near the ships, to keep the men vigorous, and to train them for their journeyings.

On the 12th of April, the parties for the westward exploration, amounting to 104 men, with fourteen sledges, were all ready, and proceeded, under the command of Captain Ommaney, to an encampment at the northwest end of Griffith Island. There they underwent a close inspection by Captain Austin, and spent three days in reflection and repose, and in waiting for the abatement of a tempestuous wind. On the evening of the 15th, after special prayer for success, the various parties set forth over the ice with kites attached to the boats, sails hoisted on the masts, and the men singing at the drag-ropes.

Explorations along the south shore of Parry's strait.

Six of the parties were "extended" ones,—to go to the utmost possible distance,—three along the south shore, and three along the north shore. The first sledge on the south shore, the Reliance, under Captain

CHAP. XII.

Ommaney, travelled 480 miles, discovered 205 miles of previously unknown coast, and was absent sixty days. The second, the True Blue, under Lieutenant Osborne, travelled 506 miles, discovered seventy miles of coast, and was absent fifty-eight days. And the third, the Enterprise, under Lieutenant Browne, travelled 375 miles, discovered 150 miles of coast, and was absent forty-four days. The most western point reached, was the extreme one of the True Blue, and is situated in west longitude 103° 25′, almost half way between Leopold Island and Point Turnagain on the American continent.

Explorations along the north shore of Parry's strait.

The first sledge on the north shore, the Lady Franklin, under the command of Lieutenant Aldrich, travelled 550 miles, discovered seventy miles of coast, and was absent sixty-two days. The second, the Perseverance, under the command of Lieutenant M'Clintock, travelled 760 miles, discovered forty miles of coast, and was absent eighty days. And the third, the Resolute, under the command of Surgeon Bradford, travelled 669 miles, discovered 135 miles of coast, and was absent eighty days. Lieutenant M'Clintock's party achieved the furthest westing of the three, and the furthest indeed which has ever been attained in the Polar Seas, a point in latitude 74° 38′ and west longitude 114° 20′; and they also reached a position of very eminent importance, in connection with the immediate object of their search, midway between Melville Island and Bank's Land. The other two parties moved in higher latitudes, and were stopped a little west of Sabine Island, yet they traversed tracts and encountered incidents of high interest.

Lesser westward explorations.

The parties of less limited range than the "extended" ones, deposited provisions, set up marks, made observations, ascertained positions, and effected minor explorations; and were absent during periods of from twelve to thirty-four days. They may seem to have had easier work than the others, yet they suffered more severely; for no fewer than twenty-eight of their men were frost-

bitten, and one, George S. Malcolm, who had command of a sledge, died from exhaustion and cold. The extended parties got all back in good health, and needed only a little rest and comfort to repair the effects of their privation and fatigue. But not one of all the parties, near or remote, obtained the slightest trace of the missing adventurers; and Captain Austin, after receiving and considering well the reports of all, "arrived at the conclusion that the expedition under Sir John Franklin did not prosecute the object of its mission to the southward and westward of Wellington Strait."

Exploration of Wellington Channel

The sledge-parties for the exploration of Wellington Channel amounted to six, and comprised forty-one men, and were officered by Captain Stewart, Messrs. Marshall, Reid, and J. Stuart, and Surgeons Sutherland and Goodsir. They started on the 17th of April, under the general superintendence of Captain Penny; but they soon encountered severe weather, and were buffeted and baffled by it for a series of days, and compelled to return; and on the 6th of May, after special prayer to God for support, they again started. Some coursed so far and so curvingly as to make a near approach to the most northerly of Captain Austin's parties; and all figured largely and respectably in the squadron's aggregate of exploits. But their chief feat—the feat at least of those on the Channel and west of it—was a discovery which put a stop to their progress toward the north, and gave an entirely new complexion to the search in which they were engaged,—the discovery of a wide westward strait of open water, lying along the further side of the lands which flank Barrow's Strait and Parry's Strait.

Discovery of Victoria Channel.

Captain Penny personally shared in this discovery, and personally made enormous exertions to follow it up. The explorers, proceeding up Wellington Channel, arrived in latitude 75° 22′ at Cape Duhorn, and thence ten miles north-westward to Point Decision. Captain Penny, on the 15th of May, went from this point, over the ice, north-west by north, to an island which he

CHAP. XII.

called Baillie Hamilton Island. The ice was in a very decayed state; and on the 17th, after travelling round the island, first in a north-north-easterly, and next in a north-north-westerly direction, he arrived at the open strait, saw in it twenty-five miles of clear water, and discovered a headland fifteen miles distant west by north, over-canopied by a dark sky, which indicated an expanse of open water on the further side. This point was found to be in latitude 76° 2′ and west longitude 95° 55′; and the strait received the name of Victoria Channel.

Exploration of Victoria Channel.

Captain Penny hastened back to the ships for a boat, and drove every means to have one promptly mounted on sledges and away, but did not get it up to the strait without vast effort, and some tantalizing delays. But at length he launched it, laded it, and pushed off to the unknown. He proceeded only ten miles, till he was obliged to seek refuge in a bay from a westerly gale and a strong head sea; and he afterwards contended much and almost constantly with unfavourable winds and rapid tides; yet he succeeded in examining 310 miles of coast, and did not desist till his stock of provisions sank admonishingly low. He put about on the 20th of July, and he made his way to the ships amid constant rain and tempest, insomuch that, in the route over the ice, he had to ford rapid streams.

Importance of Victoria Channel.

Captain Penny thus ranks high as a discoverer. Victoria Channel, with its far-north position and its iceless water, is quite as remarkable an object as anything discovered by Sir John Ross, and not much less so than the things discovered by Sir Edward Parry. As to the immediate design of his adventures, however, Captain Penny had all his labour for nothing. He found not a trace of the Erebus and the Terror. Yet he acquired strong conviction that they had gone up Wellington Channel and along Victoria Channel; and if he could have got one of Captain Austin's steamers, he would have instantly gone in search of them through the latter; or if he could have promptly procured one on

his arrival in Britain in September, he would have gone back, late though the season was, in the hope of penetrating, by the route of his new discovery, into the Polar main, and there obtaining a solution of Sir John Franklin's fate.

The American explorers were prevented from taking any part in the searching operations of the spring by their experiencing the same kind of involuntary ejection from Lancaster Sound which befel Sir James Ross's expedition in the Enterprise and the Investigator. Their vessels were frozen in opposite Wellington Channel, and were carried thence to the east, slowly and rigidly, and in stern defiance of all possible resistance by man, to a point south of Cape Walsingham. They drifted a linear distance of at least 1050 miles, and suffered much from the commotion of the ice, and were not set free till the 10th of June.

The American expedition.

Sir John Ross's connexion with the searching squadron was mainly distinguished—or at least is so in the popular estimation of it—by a peculiar theory which he formed, on the faith of an adopted Esquimaux, respecting the fate of Sir John Franklin's party,—that they were all massacred by a tribe of natives on the east coast of Baffin's Bay. This theory was mooted, during the outward voyage, when most of the squadron were in company, near the scene of the alleged massacre, and was anxiously investigated by a council of the officers, and pronounced utterly incredible. Sir John Ross, too, was understood to discard it; yet, in spite of the opinion of the council, and in spite of subsequent sure evidence that the Erebus and the Terror had wintered far to the west, he revived the theory, and on his return home, made formal offer of it, as his solution of all the mysteries of the Franklin expedition.

Sir John Ross's theory respecting Sir John Franklin's fate.

Yet Captain Austin seems to have thought, as well as Sir John Ross, that the Erebus and the Terror had gone back to Baffin's Bay; for, after the failure of the searches for further traces of them west and north of

Captain Austin's opinion.

CHAP. XII.

Examination of Jones' Sound.

the mouth of Wellington Channel, he supposed that they probably tried to reach the Polar sea through Jones' Sound, which opens off the north side of the upper part of Baffin's Bay. He accordingly went round to that place with his two steamers, and explored it. He found it about sixty miles wide at the entrance, —a width which greatly exceeds that given it in the Admiralty chart; and he sailed about forty-five miles up its southern shore, and was there arrested by a fixed barrier of ice; and he then sailed along the face of that barrier, twenty-five miles, to the northern shore, and then traced that shore down to the entrance. But he saw nothing to indicate that the Erebus or the Terror had been there; and he judged from well-defined appearances to the west, that the Sound is closed by land not very far above the point which he reached, and has no communication with the Polar Sea. He then thought all further attempts at exploration either useless or inconsistent with his instructions, and set sail for England.

* * * * *

The unexpected and somewhat premature return of the squadrons under command of Captains Austin and Penny in the autumn of 1851, tended very much to increase the universal desire that the mysterious fate of Sir John Franklin's expedition should be thoroughly investigated. The interesting details brought back of the discovery of Franklin's winter quarters on Beechy Island, in 1845-46, revived the hopes that had begun to fade rapidly away. The opinion of those engaged in the sledging operations of 1851, that the missing ships had proceeded up Wellington Channel, and entered the open sea discovered by Captain Penny, and believed by him to be the great Polar Basin—and the supposition that the lost ones might still be imprisoned, and alive, in its gloomy solitude of ice—all tended to influence the public mind in favour of a continuance of the search. Accordingly, in the spring of 1852

another expedition,—the most extensive that had yet sailed for the polar regions,—was fitted out, and placed under the command of Sir Edward Belcher. This squadron consisted of five vessels—the Assistance, the Resolute, the North Star, and two steamers, the Pioneer and Intrepid. These set sail in April for Baffins Bay, purposing to make Beechy Island their head quarters, whence the various vessels were to set out separately or together, as might be thought best, to search the neighbouring coasts. The Assistance and Pioneer were directed to sail up Wellington Channel, under the command of Sir Edward Belcher. The other two were to proceed, under Captain Kellet, to Melvile Island, there to deposit provisions for the use of Captain Collinson and Commander M'Clure, should these gentlemen be successful in making the passage from Behring Straits, for which they had set sail, it will be remembered, in January 1850. The North Star was to remain at Beechy Island as a depôt store-ship.

Sir Edward Belcher's squadron.

While these were engaged in prosecuting the search up and around Wellington Channel, the Prince Albert returned from her voyage to Prince Regent's Inlet in October 1852. Lady Franklin had refitted this vessel in 1851, for the purpose of sending her to explore the shores of Prince Regent's Inlet; a quarter which had not been examined with sufficient care, and which, it was supposed, would very probably be visited by the crews of the missing expedition, in the event of their being obliged to abandon their ships, as it was well-known to them that a large quantity of provisions had been left there by Sir E. Parry in 1823.

The Prince Albert.

The adventurous and deeply interesting voyage of this little vessel deserves our special regard, for more reasons than one. She had sailed under the command of Mr. William Kennedy, a gentleman who, besides being possessed of the energy and resolution necessary for the hazardous enterprise which he was called upon

CHAP. XII.

Mr. Kennedy.

to conduct, was also thoroughly experienced in the manner of travelling by *land* in the snowy regions of the north—an experience which gave him an immense advantage over all the other navigators who had gone before him; for a very considerable portion of the ground explored in 1851 having been done on foot and with sledges, they had difficulties to overcome which a slight experience in northern land-travelling would have rendered much less formidable. Mr Kennedy's previous acquaintance and familiarity with the snow-shoes and the dog-sleigh, the moccasin and the arctic bivouac, admirably qualified him for the exploration of Prince Regent's Inlet, much of which had to be performed in the dead of winter, and on foot; and the details of his proceedings as given in his lively narrative, have in consequence a dash of novelty which many of the later arctic expeditions do not possess. We shall enter, therefore, somewhat more fully into this, the private expedition of Lady Franklin, and glance in a more cursory manner at the proceedings of the other vessels that were engaged in the search, as our limits do not permit of a full account of each expedition's proceedings, even were such desirable.

Departure of the Prince Albert in 1851.

On the 22d of May 1851, the Prince Albert set sail from Aberdeen. For a considerable time previous to her departure she had been undergoing a thorough repair, in order to fit her for battling with the ponderous ice which she was soon to encounter. Along her sides, from the keel to about two feet above the water-line, there was a doubling of elm planking of fully two and a half inches thick, intended not only to strengthen the hull of the little vessel, but to preserve her sides from the tear and wear of sailing through, and rubbing against, sharp, rasping pieces of ice. The bow and stern-post were sheathed with wrought iron a quarter of an inch thick, and a broad strip of thick sheet iron ran along the water-line as far aft as the main mast. Her hold was a perfect

labyrinth of cross beams and massive fastenings, to enable her to withstand the evil consequences of a 'nip;' and the arrangements generally were conducted in a manner which, while it indicated the dangerous nature of the service, also served to assure her crew that nothing had been left undone which could in any way conduce to their comfort and safety. As boats, in the regions for which they were bound, are of great service, and require to be made of excellent material, it was deemed advisable to supply the little Prince with three. One was made of gutta-percha, and another of mahogany, the third being a small *dingy* of the ordinary kind, besides one of Halkett's Mackintosh boats, which have been frequently of the greatest service to Arctic travellers, and have, on more occasions than one, drawn forth their expression of warm gratitude to the inventor. Mr. Kennedy's knowledge of the nature of the country to which he was bound, and his conviction that the search for Franklin would have to be ultimately conducted by boat and land expeditions, induced him to provide a supply of "raw material," in the shape of dressed moose skins and parchment, to be converted during the voyage into moccasins, snow-shoes, dog-sledge-traces, &c. He also got a tin *kayak*, made in imitation of those used by the Esquimaux, intending to adopt the native method of travelling, in the event of the ship and boats being rendered by any accident unserviceable. Provision for two years was put on board, and part of this consisted of a ton and a half of that invaluable kind of food called pemmican, which is made by the demi-savage half-breeds of the prairies; and, in consequence of its nutritive qualities, its compact solidity, and durability, forms the principal food of arctic travellers.

The Albert's boats, &c.

The ship's company consisted of eighteen in all, including Mr. Kennedy, the commander, Lieutenant J. Bellot, the second in command, and Mr. Cowie, the

The Albert's crew.

CHAP. XII.

Lieutenant Bellot.

surgeon. Mr. Bellot was a spirited young officer in the French navy, whose romantic love of adventure led him to offer his services to Lady Franklin in the search which had now been going on for some years. He soon proved himself to be in every way a most useful auxiliary, and an honour to the nation to which he belonged. Among the crew, who were all picked men, there were several who had previously tried their metal in the polar regions; and it is with almost a thrill of interest that we read that one of them was John Hepburn, who every reader of arctic travel during the present century will recollect, was the faithful attendant of Sir John Franklin during his first adventurous, and, in some respects, tragic journey through North America. His spirit had fired with an irresistible desire to assist in searching for the hero with whom, in his youth, he had shared the perils of the wilderness; and now, in his old age, he was going to face these perils anew in their wilder forms, on the ice-laden waters of the Polar Sea. Another of the men had travelled with Dr. Rae, on his first expedition to Repulse Bay; and another had accompanied Sir John Richardson in his boat journey through the interior of America. Almost all of them, in one way or other, possessed some experience in arctic travelling, so that a better ship's company could scarcely be found than the one which stood on the deck of the Prince Albert, on the 3d of June 1851, to bid farewell to the noble hearted Lady Franklin, who had come to Stromness to witness the departure of the expedition, and breathe a fervent prayer for its success. One by one she took leave of the officers and crew; and then, stepping over the side, she returned to the shore, while the men gave three hearty, hopeful cheers, as the little vessel bounded from the shore and stretched out into the wide Atlantic, the Union-Jack at her peak, and the French flag, in honour of Lieutenant Bellot, flying at the fore.

Lady Franklin and the Albert's crew.

As we have seen them now fairly afloat on the blue waves, it may not be uninteresting here to consider the plan of their proceedings. "While the Prince Albert," says Mr. Kennedy, "is proceeding rapidly forward with a succession of delightful weather towards Cape Farewell, let us take a cursory glance at our instructions. We know nothing at this time, it must be remembered, of the movements of Captains Austin's and Penny's squadrons, nor of the discoveries in Wellington Channel, and the lands to the south and west of Cape Walker. The locality allotted for our search included Prince Regent's Inlet, and the passages connecting it with the western sea, south-west of Cape Walker, to which latter quarter Sir John Franklin was required in the first instance to proceed.

Plan of search.

"This search was assumed to be necessary on the following grounds:—

"1. The probability of Sir John Franklin having abandoned his vessels to the south-west of Cape Walker.

"2. The fact, that when Franklin sailed, he believed that an open passage was to be found from the westward into the south part of Prince Regent's Inlet, according to the chart supplied to him from the Admiralty, and which does not exhibit the discoveries of Rae, made subsequently to that period.

"3. Sir John Franklin would, it was thought, be more likely to take this course, through the country known to possess the resources of animal life, with the wreck of the Victory in Felix Harbour for fuel, and the stores at Fury beach, further north, in view, than to fall back upon an utterly barren region of the north coast of America.

"4. He would be more likely to expect succour to be sent to him by way of Lancaster Sound, and Barrow's Straits, into which Prince Regent's Inlet opens, than in any other direction."

For these reasons, then, and with this end in view, the Prince Albert spread her sails to the breeze. The

CHAP. XII.

wind was for the most part favourable. The crested billows of the Atlantic tossed her sometimes, it is true, but did not retard her. Day by day the favouring gales carried them farther from home, and gradually the indications of a high latitude began to thicken round them. Ice occasionally floated past, in light-green, fairy-like islands; now and then a blow on the bow told of the enemy, whose terrible power renders the mysterious seas of the north almost impenetrable; frequently a jet of water and a heavy roll of some dark object in the sea, betrayed the presence of the arctic whale; and, at length, on Sunday the 24th of June, they descried the coast of Greenland on the distant horizon.

Exciting news.

In Baffin's Bay they were visited by the captains of two whaling vessels, who threw them into great excitement by telling them of the discovery of Franklin's winter quarters in 1845, with the details of which the reader is already acquainted. This information induced Mr. Kennedy to direct his course to Upernavik, the Danish colony on the west coast of Greenland, partly for the purpose of taking in additional supplies for the use of the winter travelling parties, but chiefly with the hope of gaining further information of the recent discoveries, from the American searching vessels which had wintered in the pack. In this, however, he was disappointed.

Colony of Upernayik

The little colony, in whose sheltering harbour the Prince Albert now anchored, is graphically described by Mr. Kennedy. "Upernavik," says he, "which we reached on the morning of the 10th, is one of that interesting group of little colonies with which the enterprise of the Danes has dotted the west coast of Greenland. It was perhaps natural in one who had recently come from a British possession,* in some respects

* Mr. Kennedy had formerly been in the service of the Hudson's Bay Company.

analogous, although infinitely superior in productiveness and capability of improvement—I mean the territories around Hudson's Bay—to take some interest in these remarkable and unique examples of colonizing under difficulties. My first impression was certainly one of gratified surprise, that here, considerably within the Arctic Circle (within a degree or two in fact, of the entrance of Wellington Channel, where Franklin, had he remained, must, according to some lugubrious authorities, have long ago perished of starvation), there was a Christian community, not only living, but, after a fashion, thriving. We were informed by the governor that there was, even at this early period of the season, one thousand Danish tuns of oil and blubber stored, from the produce of the summer fishery. There was likewise visible evidence in every direction of an abundance of venison, water-fowl, and eggs, as well as seals. The houses were built of wood, very small, and had a singularly amphibious look about them, from being covered with tar from top to bottom, looking for all the world like so many upturned herring-boats, ready on any emergency to take to the water.

Interesting character of the colony.

"A party of the Esquimaux, attached to the settlement, had come in with the produce of some hunting excursion in which they had been engaged, and I was much struck with their intelligence, and their well-clad, comfortable, and healthy appearance. This, I learned, was in a great measure due to the benevolent interest of the Danish government in their behalf. There is not a station, I was given to understand, along the whole coast of Greenland, which has not its missionary and its schoolmaster for the instruction of the natives; and, judging from what we saw and learned at Upernavik, the Danish exchequer is not without material and substantial proofs of the gratitude of the poor '*Innuit.*' Thus instructed, cared for, and their energies disciplined and directed, the

Benevolent interest of the Danish government.

CHAP. XII.

Esquimaux of Greenland give employment, as I am informed, to six ships annually, in carrying the produce of their hunts and fisheries to Denmark."*

Purchases at Upernavik.

At this place six large Esquimaux dogs were purchased. These were intended to assist in dragging sledges during the winter, a species of work to which dogs in these lands are much accustomed, and for which they are peculiarly well adapted. A few pairs of seal-skin boots, shoes, and trowsers *à l' Esquimaux*, were also procured, and the Prince Albert proceeded on her voyage. The much-dreaded "middle ice" was reached soon after leaving, and four days were spent in passing through it to the western side of the bay, during which time they were constantly employed in sailing, boring, pushing, thumping, and warping—not unfrequently exposed to the perilous nips, which are sometimes productive of such dire consequences—and occasionally set fast altogether. At this point in the voyage it was deemed advisable to test the powers of some carrier-pigeons with which they had been provided; but the poor birds refused to take the long flight to England, and resolutely persisted in returning to the ship again, after a short survey of the icy region in which they were let loose. During the passage of the middle ice, a large quantity of provisions had been got up on deck, to be ready in case an unfortunate crush should sink the vessel. This was now re-stowed in the hold, on their getting into the comparatively clear western waters of Baffin's Bay.

Dangers of the middle ice.

One evening about this time, while they were sailing quietly among beautiful and fantastically formed fragments of ice, which obliged them frequently to deviate a little from, but did not interrupt, their course, a shout was heard ringing through the calm still atmosphere, and very soon four Esquimaux paddled out

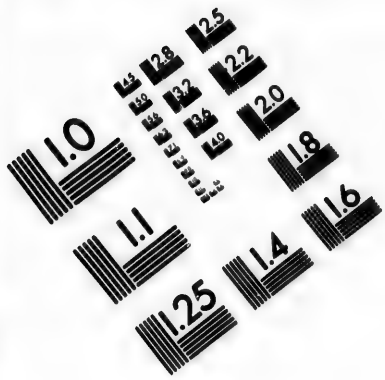
* Narrative of a Second Voyage of the Prince Albert, by Mr. William Kennedy.

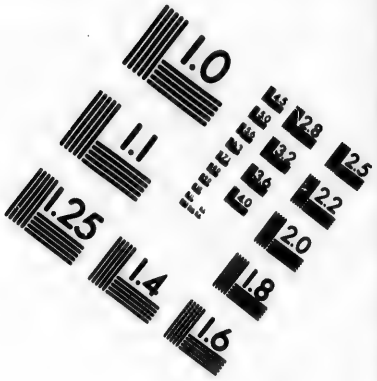
to them in their seal-skin kayaks. They speedily clambered on board; and one of the crew happening to have some slight knowledge of their language, a vigorous flow of query and reply commenced, in the course of which much useful information as to the nature of the coast and inlets was obtained from them. One, especially, proved to be a very expert draftsman, and by means of a bit of chalk he drew on the deck the outlines of various parts of the coast, which helped them not a little. After extracting all the information from them that could be got, it was suggested that the present was an excellent occasion for trying the effect of music on "the savage breast." Before they left England, Prince Albert had presented the crew with a splendid barrel-organ, which it was supposed would prove a source of much gratification to the ice-bound mariners during their lengthened sojourn in the Arctic regions. This instrument was now produced and set in motion. "Its effect," writes Kennedy, "was anything but soothing upon our visitors. From the first it was evidently regarded as possessed of some mysterious powers of life and volition, which they acknowledged by dancing and singing around it in the most uproarious manner. One poor fellow was particularly distinguished by the oddity and extravagance of his behaviour. At the first note he was observed to 'grin horribly a ghastly smile;' this was followed by a whoop, and a yell, and a leap in the air, as if he were possessed by a legion of demons; and so he went on leaping, and howling, and using all the frantic gesticulations of a madman, till, in mercy to the poor creature's wits, we were forced to stop the organ and his ecstacies together."

Esquimaux geographer

Effects of music.

Their progress after this was very much interrupted by ice and contrary gales. All attempts to reach Cape Riley, and, subsequently, to enter Leopold Harbour, were completely frustrated. Far as the eye could reach down the west side of Prince Regent's Inlet—





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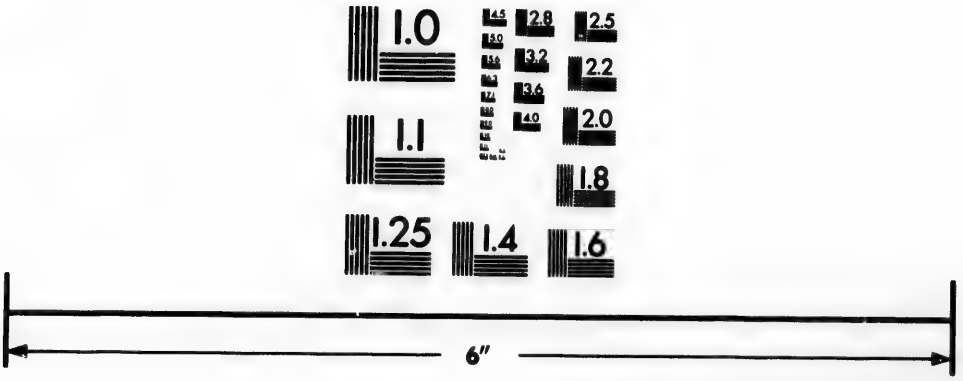

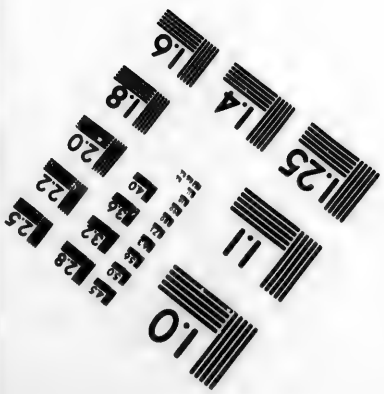

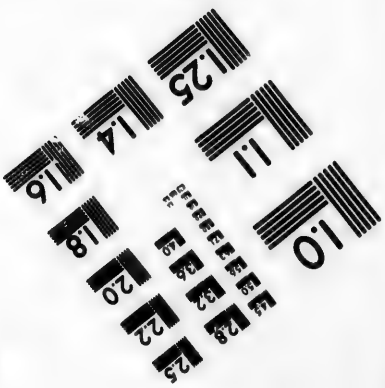

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CHAP. XII.

which was to be the scene of their searching operations—huge barriers of ice met the view. They pushed boldly in amongst it, however, and succeeded in winding a tortuous course to Elwin Bay, which they found quite closed up. Batty Bay and Fury Beach were next visited, where they met with similar disappointment, and where they also perceived that the ice—between which and the shore they had been sailing—was setting down upon them; so they were obliged to beat a hasty retreat, in order to escape being crushed to pieces. It was now obviously fruitless to attempt the western side of the Inlet under present circumstances, so they put about and ran for Port Bowen on the eastern shore, which was comparatively free from ice. Here they found traces of the party which wintered at this spot with Sir Edward Parry, in 1825. Among other relics they discovered a solitary grave. A rude headstone bore the name of John Cottrell, seaman of H. M. S. Fury. There is something inexpressibly desolate and sad in the thought of this solitary grave. Far from the home where the mouldering forms of his kindred repose—on the sterile, almost unknown and untrodden shores of an ice-bound sea, with no eye, not even that of a stranger, to read the rough inscription cut by some kindly shipmate on his tomb, and undisturbed by any sound save the thunder of disrupting ice, or the dreary, bitter howling of the Arctic breeze.

Relics of Parry's expedition in 1825.

To winter at this place, while all their intended work lay on the other shore of the Inlet was quite out of the question, so it was resolved at all hazards to attempt a landing again. Accordingly, on the 9th September they recrossed the strait and succeeded in approaching close enough to the shore to render an attempt to land in the boat somewhat feasible. The gutta-percha boat was therefore got out, and Mr. Kennedy with four of his men,—named respectively, Matheson, Smith, Irvine, and Sutherland—jumped

Landing the gutta-percha boat.

into her and rowed for the beach. This they reached without difficulty by means of a narrow lane of open water which was opportunely discovered. On ascending the cliffs of Cape Sepping, Mr. Kennedy found, to his joy, that the harbour of Port Leopold was quite free from ice, and if the ship could maintain her position for a few hours longer, he had no doubt of being able to effect an entrance. On descending to the beach, however, it was found, to the consternation of Mr. Kennedy and his men, that the passage by which they had entered was now blocked up. The boat had not been fastened to the beach, but to a large piece of ice, which, with the whole body of the pack, was drifting down the Inlet, carrying boat, ship, and men along with it. To make matters worse, night was coming on and nothing could be seen or heard around but huge masses of ice grinding, tossing, and rearing furiously on every side. To return to the ship under these circumstances was impossible, so they made for the shore as fast as possible, dragging the boat along with them. On reaching it they pulled the boat up and turned it over so as to form a kind of shelter from the night air, and then prepared to pass the night under it although little sleep was anticipated; for, besides the anxiety occasioned by their strange position, their clothes were almost covered with ice, and they had no blankets or coverings of any kind. From his former experience in Arctic scenes, Mr. Kennedy knew the danger of falling *asleep* under such circumstances, and, notwithstanding the strong desire that he and his men felt to indulge in repose, he only allowed them to *rest* for an hour at a time, obliging them during the remainder of the night to keep in active motion.

Drifting of the ship.

With the dawn of the following morning the shivering party scrambled to the top of the highest cliff of Cape Seppings, but not a vestige of the vessel was to be seen! The consternation of the poor men, who were thus cast away on this bleak shore, may be more readily

Ship out of sight.

CHAP. XII.

conceived than described. Without provisions, scantily clad, no vessel, and an approaching hyperborean winter, their condition seemed forlorn indeed. One fortunate circumstance, however, cheered them not a little, and this was the fact that, two years before, Sir James Ross had left a deposit of provisions at Whaler Point on the other side of the harbour. Should this be found in good condition there was every reason to hope that they might manage to pass the winter in at least some degree of comfort. Thither, therefore, Mr. Kennedy and his four men now directed their steps. A short walk brought them to the spot, where, to their great joy, they found the provisions just as they had been left, and quite good, with the exception of a cask of tallow, a case of chocolate, and a barrel of biscuit, which had been destroyed and their contents demolished by the bears and foxes. A house erected by Sir James Ross was also found in pretty good condition, being only a little damaged in the roof. Near to this there was a flag-staff to which a cylinder was attached containing a notice of the deposit of provisions, and of the future intentions of the party by whom they had been left.

Joy at finding provisions.

One can form but a faint idea of the dreary, desolate situation in which these five unfortunate human beings were now placed. Accustomed as we are to read and hear of the romantic and the marvellous until our minds cease to make an effort to comprehend what is so very difficult of comprehension, it is not easy to understand, in all its horrors, the prospect which lay before these men of spending an Arctic winter of seven or eight months among the desolate wastes of ice and snow which encompassed them on every side. Even in the event of their surviving it, there was the possibility of their being obliged to remain much longer, until some passing vessel should carry them away from their dreary home. It is interesting to trace the workings of men's minds in such straits.

Fearful prospect.

"It was now," says Mr. Kennedy, "the 10th of September. Winter was evidently fast setting in, and from the distance the ship had been carried during that disastrous night, (whether out to sea or down the Inlet we could not conjecture), there was no hope of our being able to rejoin her at least during the present season. There remained, therefore, no alternative but to make up our minds to pass the winter, if necessary, where we were. I pass over the anguish of the reflection of such a termination of our enterprise, so full as we had been of hope, confidence, and determination to accomplish the duty that had been assigned to us. . . . . It was a relief, therefore, to my own sorrowful contemplations, to begin to discuss with the men, with as much cheerfulness as I could command, our little plans for our future proceedings. The first object to be attended to, was the erecting of some sort of shelter against the daily increasing inclemency of the weather, and for this purpose the launch, left by Sir James Ross, was selected. Her main-mast was laid on supports at the bow and stern, about nine feet in height, and by spreading two of her sails over this a very tolerable roof was obtained. A stove was set up in the body of the boat with the pipes running through the roof, and we were soon sitting by a comfortable fire, which, after our long exposure to the wet and cold, we stood very much in need of.

Preparations for wintering.

"There was a plentiful supply of blanket bags in the depôt, by aid of which we were soon in possession of as comfortable bedding as we could desire. Out of the same material we were able to supply ourselves with some excellent clothing, using, in the absence of ordinary needles and thread, sail needles and twine, which answered our purpose equally well. These, and other preparations of a similar nature, carried us through the first week of our dreary residence with a very tolerable approach to comfort and contentment."

In the midst of these wild scenes, it is pleasing to

CHAP. XII. observe the effects of early religious training on those whose profession is but too much characterized by a reckless indifference to spiritual things. The following quotation from Mr. Kennedy's journal indicates a healthful state of feeling pervading the little band.

Sabbath exercises.

"*Sunday, 21st September.*—We were able to enjoy a day of rest, after a severe and laborious week of exertion. It was a pleasing sight, in the absence of the regular means for conducting the exercises appropriate to the day, to observe how the men were occupied in recalling to mind some of the sacred melodies of their native land, and the simple hymns, stored up in their memories from childhood, as well as those exquisite cullings from the Word of Truth, embodied in the Shorter Catechism of the Church of Scotland."

Mr Kennedy's plans

Mr. Kennedy now arranged his plans for the future. To undertake a long winter journey over the country on foot had been his original intention, but under the present circumstances this was impossible. He therefore determined, first, to send out travelling parties, as soon as the state of the ice should permit, to institute a strict search for the ship in every direction in which it was likely that she could have been carried; and, secondly, in the event of being unsuccessful in this, it was determined to make a journey early in spring to Cape Walker, to search in that direction for traces of Captain Franklin and his crews; and so accomplish at least part of the object for which this expedition had been fitted out.

Shoemaking.

There were difficulties in the way, however. Shoes were wanted. Without shoes nothing could be done at all, so it behoved them to exert their ingenuity. There was nothing in the depôt of provisions that could be turned to this use; but, fortunately, a good deal of the canvass covering of the old house was left, and out of this several pairs of shoes were made. They answered pretty well, although, indeed, they lasted not much longer than a few days, so two of the

party were set to work to devote their whole time to the making of a supply of canvas shoes which should last them during the whole winter. Snow shoes, after the fashion of those used by the North American Indians, were also required; Kenneth Sutherland, the carpenter, was therefore set to construct frames out of such timber as he could find among the stores, out of which he also soon constructed a sleigh after the Esquimaux model. Being much annoyed every morning by smoke while the fires were being lighted, in consequence of the small size of the pipes which formed chimneys, they cast about to devise a remedy. One was soon found. A preserved potato case was cut up and made into new pipes of sufficient calibre, and the smoke found no further difficulty in following the bent of its inclination to ascend. A grindstone was wanted, and here again human ingenuity was put to the test and triumphed. A block of sandstone was found—the carpenter's persevering energy was brought to bear on it—and the grindstone was made!

Snow shoes.

Thus they spent their time, in contriving and constructing such implements as were absolutely necessary, and in preparing for their intended journeys. These occupations were occasionally varied by excursions in the neighbourhood of their dwelling, made sometimes for exercise, and sometimes with the view of capturing one of the bears which prowled around the boat, attracted, doubtless, by the savoury odours that proceeded from their kitchen. In these hunts, however, they were not successful, but they furnished a beneficial degree of excitement which helped to keep up the spirits of the men and to enliven their otherwise monotonous existence. The Sabbaths were always days of rest, and devoted to the worship of God, whose tender care had thus provided them with all the necessaries, and not a few of the comforts, of life.

Bear hunting.

On the 17th of October, while they were engaged in the usual routine of daily duty, a shot was heard to

CHAP. XII.

reverberate among the cliffs of Cape Seppings. So unwonted a sound caused them to rush tumultuously from their occupations, when they found, with emotions of inexpressible thankfulness and joy, that it proceeded from a party of seven of the Prince Albert's men, headed by Mr. Bellot, who had dragged the jolly-boat all the way from Batty Bay, in the hope of finding and succouring their long-lost comrades. "I cannot refrain," writes Mr. Kennedy, "from recording here, my warmest thanks to Mr. Bellot, not only for this, but two other attempts which he had made to communicate to us the intelligence of the Prince Albert's position, and to bring us a supply of clothing. He had set out with two men to come by land to Port Leopold, the third day after getting into Batty Bay, but after three days march, over the wild and rugged hills, wading through deep snow, and walking against continual drift, they were obliged to return to the ship after much suffering from cold and wet. He next made a gallant attempt along shore by means of dogs and sledges, but getting on weak ice, fell through, and had again to return with the loss of the sledge and part of its contents. The third (the present) attempt was more successful. The little boat, as already stated, had been dragged all the way, in case of any occasion arising for its use where the ice had not formed. They found the ice, however, formed all the way to this point, and in many places so rough, that they had often to drag their boat over points of land."

Unexpected arrival of Bellot and other comrades.

Previous efforts of Bellot.

From those who had thus opportunely arrived to succour them, they learned that the Prince Albert was securely moored in Batty Bay; and, as there was nothing now to prevent their setting out to rejoin the vessel, preparations were commenced immediately. The activity and reactionary flow of spirits among the men was very high at thus meeting with their long lost comrades. Five weeks had elapsed since their disastrous separation, and, that evening, a truly joyous party

Preparations to rejoin the ship.

assembled under the covering of the old launch, and caused her timbers to quake with the sound of rough old sea songs, and tough yarns, while they quaffed brimming bowls of hot strong chocolate to the success of their expedition.

On Wednesday, the 22nd of October, their preparations being completed, a paper was deposited in the cylinder, containing an account of their proceedings, and they commenced their journey to Batty Bay.

It is a trite but true saying that "truth is stranger than fiction," and the truths which we occasionally meet with in Arctic narrative, go a great way to strengthen the proverb. The mode of travelling now adopted by Mr. Kennedy and his men, was of a kind, if not quite novel, at least exceedingly curious. First of all a strong sleigh was made, on which the boat was placed, then all their goods and provisions, &c., were securely stowed away in the latter, and hauled down to the ice on Leopold Harbour, which stretched out a smooth and level plain before them. The mast was then erected, the sails set, and the whole party jumping in, away they went over the bay before a spanking breeze at a rate that was quite marvellous. But, alas! for the uncertainty of human affairs. The prosperous commencement of their journey was soon followed by an unfortunate crash. The sledge proved to be too fragile for this dashing style of progression, and broke down just as they got about half way across the bay, leaving them to repair damages for the remainder of the day. The evil consequences of the accident did not terminate here. Night overtook them ere they could gain the land; and, as it was not desirable to sleep on the frozen sea if they could possibly avoid it, they were obliged to stumble on in the dark, which was rendered, if possible, still more palpable by a heavy fall of snow. After much stumbling into crevices and cracks, frequent wanderings about they knew not where, and occasional dashing of the shins upon sharp

Curious mode of sledge travelling.

An accident.

CHAP. XII.

pieces of projecting ice, a small bit of solid land was found in the shape of a flat limestone rock, surrounded by large masses of stranded ice. Here they erected a small tent, and, with some coals which had been brought from Whaler Point, boiled a large kettle of tea, and enjoyed themselves exceedingly after the fatiguing and protracted march of the day. It was a feature of their whole journey, however, that difficulties presented themselves at every turn, and after tea one of a somewhat perplexing nature arose. The tent, it has been said, was little, and the party numbered thirteen, none of them small—and one, the carpenter, of colossal proportions. Now these certainly got in and *sat down* round the kettle; but it was painfully obvious that they could not indulge in *horizontal* repose that night. The problem was difficult but it was partially solved at last. Six of the party sat down on one side of the tent and six on the other, thus leaving a space of about three feet clear to stretch their legs; while Mr. Bellot—whose good-humoured aptitude to accommodate himself to all circumstances was very conspicuous during the whole expedition—agreed to squeeze in below the said twelve pair of legs, a small space at one end being allowed for the egress of his head.

Perplexing case.

Finding it impossible under these peculiar circumstances to sleep, it was resolved to have "a night of it," and, accordingly, a candle was lighted. No candlestick was there however, so each agreed to hold the light for a quarter of an hour and then pass it to his next neighbour. Songs were then proposed and hilariously executed until the candle went out, when the whole party made a vigorous but abortive attempt to sleep, groaning, nodding, and sighing deeply—especially poor Mr. Bellot, on whom the ever-increasing weight of the twelve pair of legs began to tell with the effect of a hydraulic press—until the grey dawn warned them to rise and resume their journey.

"A night of it."

The discomforts of the past night made them determine in future to adopt the Esquimaux plan of building a snow hut each night, in which to sleep. Mr. Kennedy's description of these primitive dwellings is interesting. "The process of constructing a snow-house," says he, "goes on something in this way—varied, of course, by circumstances of time, place, and materials. First, a number of square blocks are cut out of any hard drifted bank of snow you can meet with, adapted for the purpose, which, when cut, have precisely the appearance of blocks of salt sold in the donkey carts in the streets of London. The dimensions we generally selected were two feet in length, by fourteen inches in height, and nine inches in breadth. A layer of these blocks is laid on the ground nearly in the form of a square, and then another layer on this, cut so as to incline slightly inwards, and the corner blocks laid diagonally over those underneath, so as to cut off the angles. Other layers follow in the same way, until you have gradually a dome-shaped structure rising before you, out of which you have only to cut a small hole for a door, to find yourself within a very light, comfortable looking bee-hive on a large scale, in which you can bid defiance to wind and weather. Any chinks between the blocks are filled up with loose snow with the hand from outside; as these are best detected from within, a man is usually sent in to drive a thin rod through the spot where he discovers a chink, which is immediately plastered over by some one from without, till the whole house is as air-tight as an egg."

Construction of snow huts.

In these snowy dwellings they afterwards passed many nights in considerable comfort, and on the present occasion, certainly found them a great improvement on the small tent. In a few days they reached the ship, where a hearty welcome from their comrades awaited them. In these regions shipmates could ill be spared. At the post of duty every man

Arrival at the ship.

CHAP. XII.

is needed, and at the mess-table the absence of a single individual of the little community is felt. It was therefore with considerable warmth and energy that the whole ship's company grasped the hands of their commander and companions, whom, more than once, it was feared they might never see again.

Preparations for winter.

Preparations were now vigorously begun for passing the next eight months of the winter of 1851–2 in the ice; and for getting ready for the land journeys which it was intended to make during that season. Portions of the stores were removed from the vessel's hold to the shore, where snow-houses were built to receive them. A wash-house, a carpenter's shop, a forge, and a powder magazine were also built of the same material. The decks of the Prince Albert were covered with a housing and an embankment of snow as high as the gunwale, built around her. Mr. Kennedy's notions of Arctic travelling were somewhat different from those of his predecessors. Instead of waiting till spring to commence the land journeys, he made them in the dead of winter, so that the men were set to the preparatory work of making snow-shoes, moccasins, and sledges, for eight hours every day, instead of passing the time in those winter amusements and recreations which figure so largely in the narratives of former navigators. "We were indebted," says Mr. Kennedy, "to the generous kindness of my esteemed friend, Mr. Barrow, of the Admiralty, for an excellent and well assorted library, supplied to the Prince Albert on her first voyage, and again on this, by means of which, we were enabled to pass our long winter evenings both pleasantly and, I trust, profitably. We had our Arctic school too, after working hours, superintended by Mr. Cowie, who occasionally enlivened his prelections on the mysteries of the multiplication table, and the curving of 'pot-hooks and hangers,' by reading aloud, from some work in our library, such extracts as were adapted for the enter-

Library and school.

tainment or instruction of his pupils. Nor did we omit, as the appropriate and befitting conclusion to the labours of each day, to offer up to Him who 'tempers the wind to the shorn lamb,' our heartfelt prayers that we might be guided by his infinite mercy to the accomplishment of the great object in which we were engaged, and be blessed as the instruments of carrying relief to our long-lost brethren."

Bellot's activity.

During all their doings, the spirited young Frenchman, M. Bellot, seems to have been ever foremost. He headed travelling parties, so soon as the ice permitted, to make deposits of provisions, &c., for the grand travelling expeditions in prospect; and, besides lending very efficient assistance in all departments on board, made daily pilgrimages to a hill in the neighbourhood, where he occasionally succeeded in obtaining a meridian observation of the sun, and *always* succeeded in getting his fingers frozen in the operation!

Mr. Kennedy, being almost the only man on board who had ever seen a snow-shoe or a dog-sledge before, was constantly occupied in constructing these indispensable implements for winter travelling, and in teaching his crew the use of them. Thus occupied, the time passed cheerfully by. The nights were long and dark, and grew rapidly longer and darker. The

Winter.

cold winds howled over them from off the chilly regions around the pole, bearing in their course blinding clouds of snow, which circled and screamed madly round the solitary ship, and whistled among the rigging as if impatient for its destruction, and then roared away over the frozen sea, to spend its fury at last on the black waves of Hudson's Bay. Sometimes the sun shone brightly out in a clear cloudless sky, glittering on the icy particles which floated in the still cold atmosphere, and blazing on the tops of the neighbouring hills whose white outlines were clearly and sharply defined against the blue heavens; and, as if Nature desired to make some compensation for the lengthened

CHAP. XII.

period of darkness to which she doomed the land, one, and sometimes two, mock-suns, or, as the sailors sometimes call them, sun-dogs, shone in the firmament, vieing in splendour with the glorious orb of day himself. Amid scenes such as these—scenes fitted to inspire the soul with a deep sense of the power and majesty of their great Creator—the crew of the Prince Albert spent the first part of the winter in busy healthful occupation.

Winter Journey.

About the 5th of January 1852, all was ready for the commencement of the long-talked-of winter journeys, and the morning of that day was ushered in with the clattering of snow-shoes and dog-sleighs, the cracking of whips, the shouts of men, and the howling and yelping of dogs driven nearly mad with impatience and pain. Although all the men of the Prince Albert were out upon the ice, only five of them were appointed to undertake the first exploratory journey. These were Mr. Kennedy, Mr. Bellot, and three of the hardiest among the men. They were all cased from head to foot in clothing in which warmth and comfort were the grand indispensable objects, and elegance of appearance quite a secondary affair—if, indeed, it was an object at all. After a good deal of bustle on the part of the men, and an astonishing degree of yelping on the part of the dogs, they contrived to set out, accompanied part of the way by nearly the whole crew.

Objects of the journey.

"The first object of the contemplated journey," says Kennedy, "was, of course, to ascertain whether Fury Beach had been a retreating point to any of Sir John Franklin's party since it was visited by Lieutenant Robinson of the Enterprise of 1849. A secondary object, should our expectations in this respect not be realized, was to form a first depôt of provisions here, with the view of carrying out a more extended search as soon as circumstances would permit. It was desirable at the same time to ascertain the state of the *roads*, by which, of course, I

mean the yet untrodden surface of the snow or ice, in the direction in which we meant to go, before commencing any transport, on a large scale, between the ship and Fury Beach, and it was thought advisable, therefore, to go comparatively light. A small supply of pemmican was all we took with us in addition to our travelling requirements, consisting of a tent and poles, blanketing and provisions for a week, some guns and ammunition, fuel, and cooking apparatus, in all weighing from two hundred to two hundred and fifty pounds. This, with ordinary roads, was what the four dogs, now with us, could draw on a flat native sleigh with the utmost ease; but on such ground as that we soon met with, on rounding the south headland of Batty Bay, to which we were escorted by Messrs. Leask and Cowie, and a part of the crew, we soon found that we required the united efforts of both men and dogs to get along at all; and, accordingly, for the rest of the journey, we pulled together in the most amicable and fraternal style imaginable."

Ammunition, &c.

Troubles and difficulties, not, however, of a very serious kind, assailed them at the very commencement of the journey. The "roads" were so bad as to be almost impassable, owing to the ice being detached from the shore, and so leaving as their only pathway the beach at the base of stupendous cliffs. Huge fragments of ice and large boulder stones met them at every turn, often rendering it a work of extreme difficulty for the united efforts of dogs and men to drag the sleigh along. Occasionally they met with what is termed a "pressure," or a set of ice upon the shore, which blocked up the path altogether, and compelled them to have recourse to axes to cut their way through; and sometimes they came to banks of hard drifted snow sloping down the face of the cliffs, and leaving only an inclined plane to drag the sleigh over. As may be supposed, this was anything but easy, and not unfre-

Troubles and difficulties.

CHAP. XII.

quently led to very amusing upsets, one of which happened to Mr. Bellot. The whole party had succeeded, after much straining and exertion, in dragging the sledge to the top of one of these slopes, and were felicitating themselves not a little on the accomplishment of the feat, when a sudden lurch in the sleigh sent it spinning over the edge of the declivity. In a moment the men threw off the drag lines, which were round their shoulders, in order to avoid being pulled along with it. Poor Mr. Bellot, however, was not sufficiently alert, the jirk threw him down, and in another second away they went, dogs, sleigh, and man, careering down the slope in a very lively and unexpected manner, until they reached the soft snow at the foot, in which they were totally engulfed; the only objects left to tell the tale being six inches of Mr. Bellots legs, projecting above the scene of devastation. They were all dug out, however, in perfect safety, and with a large addition to that wisdom which is founded on experience.

Upsetting of the sledge.

The first night, not having time to erect a snow hut, owing to the lateness of the hour, they slept in the tent, but found it very small and uncomfortable; so that, on the following evening, they stopped for the night, after eight hours walking, and built their snow-hut at the foot of a high precipice with a perpendicular mass of stranded ice at the bottom, which served for a gable. While reposing comfortably under this edifice, they were serenaded with the peculiar noise, familiar to the ear of all Arctic travellers, which is caused by a "pressure" in the ice; and which, on this occasion, groaned, ground, and crashed around them all night, and finally left them in the morning with a pile of ice at least thirty feet high, within a few yards of the encampment.

A "pressure" in the ice.

On the 8th, being within a short distance of Fury Beach, it was resolved to leave the sledge and two of the men, while Messrs. Kennedy and Bellot, with one

man, should proceed forward unincumbered. Accordingly they started, and got over the ground much more rapidly than before. That night they reached Fury Beach, and stood upon the spot around which, for several days past, their anxious hopes had been circling; but all was still and desolate as the grave. "Every object," writes Kennedy, "distinguished by the moonlight in the distance, became animated, to our imaginations, into the forms of our long absent countrymen; for had they been imprisoned anywhere in the Arctic Seas, within a reasonable distance of Fury Beach, here, we felt assured, some of them at least would have been now. But, alas for these fond hopes! how deeply, though perhaps unconsciously, cherished, none of us probably suspected, till, standing under the tattered covering of Somerset House, and gazing silently upon the solitude around us, we felt as we turned to look mournfully on each other's faces, that the last ray of hope as to this cherished imagination had fled from our hearts. . . . . The spot on which we now stood had so long been associated in our minds with some clue to the discovery of the solution of the painful mystery which hung over the fate of Franklin, and had so long unconsciously, perhaps, coloured all our thoughts, that it was not without a pang, and a feeling as if the main purpose of our expedition had been defeated, that we found all our long-cherished anticipations shattered at a blow by the scene that met our eyes."

Arrival at Fury Beach.

No traces of Franklin.

It was with sad feelings and slow steps that Mr. Kennedy and the young Frenchman entered the ruined walls of Somerset House, and prepared to take a few hours repose. A fire was lighted in the stove, which had heated the end of the building occupied by Sir John Ross's crew during the dreary winter of 1832-33. Around this they sat and supped; and, after a few hours' rest, they set out about eleven P.M. on their return to the encampment where the sledge had been

CHAP. XII.

Return to the ship.

left, which they reached about two A.M. of the following morning. From this point they retraced their steps again to the ship, which they reached on the 10th at five o'clock in the afternoon, without having encountered anything worth recording.

During the winter, travelling parties were occasionally sent out for the purpose of placing provisions *en cache* for the benefit of those who should afterwards undertake a journey along shore to the southward and across the country in various directions. These parties were often arrested by violent gales and snow-storms, which seem to have prevailed very much during the whole winter; so much so, indeed, that our veteran friend Hepburn observed, "that he had known but one gale since entering Batty Bay, and that was the gale which began when they came, and ended when they went away!" It is almost vain to attempt to give any idea to those who have not felt it, of the violence and bitter intensity of the wind in these regions during winter. They seem to revel in the enjoyment of unrestrained freedom to an extent almost unknown in other parts of the globe. They may not, indeed, exceed the violence of those fearful gales which spread death and devastation in the lands of the sirocco and the monsoon; but, accompanied and impregnated as they are with clouds of fine impalpable particles of ice and snow, there is a bitterness and fury in them—a sort of *fiery* fierceness, as they howl madly over the frozen plains of the Polar regions, that beggars all description. The little Prince Albert was a sort of beacon on which they seemed to take a special delight in venting their fury, as they whistled through the rigging and covered her with clouds of snow.

Arctic winds.

While thus imprisoned in their wooden home, the time was fully taken up in preparations for future sledge journeys. The school was also vigorously kept up by the doctor, who, besides instructing the men in various branches of useful knowledge, used to trim his

lamp and read to them portions of the excellent books with which their library was filled; and one can imagine the degree of comfort and enjoyment they must have felt at such times, when, relieved from the severer duties of the Arctic navigator's life, they sat in groups within the warm bulwarks of their ship, busily employed in the construction of snow-shoes, canvass jackets, flannel socks, and the like, listening to the doctor's voice, whose subdued tones would contrast strangely and pleasingly with fierce storms that so often howled without.

Spring.

So a great part of the winter sped away, and spring drew on apace. This was indicated by the increasing power of the sun and length of the day, though the country retained its wintry aspect for months afterwards. About the middle of February 1852, everything being in a proper state of advancement for the commencement of the "grand journey," preparations for an immediate start were made; and on the 25th of that month, they left the vessel with snow-shoes, sledges, and dogs.

The grand journey.

The party which now set out on their exploratory journey, were a detachment of five men under the command of Mr. Kennedy. These were to be followed in a few days by another detachment under Mr. Bellot, who was to be waited for at Fury Beach, whence the whole, amounting to fourteen men, were to start upon hitherto untrodden ground. They were escorted as far as the south point of Batty Bay by part of the ship's company, who were to remain behind, and at this point they parted with many kind farewells and three hearty cheers, after which they were soon lost to each other in the mist.

During the first part of the journey, the equinoxial gales blew with great violence. They were frequently detained for whole days at a time in their encampment by these fierce winds, from whose bitter fury they were, however, well protected by the snow-houses

CHAP. XII.

which they built. Mr. Kennedy's journal at this period shows their "experiences" to have been somewhat curious. "The gale," says he, "of Saturday (28th February) continuing during three days, we were of necessity compelled to remain in camp. During a short interval, about the second of March, the weather appearing to get more moderate, we were enabled to return for what cargo had been left behind during our former trip. It was taken onward as far as we dared, and we returned to the camp against a wind so keen, that no face escaped being frost-bitten—the strong wind in this instance being the cause rather than the degree of temperature, for this was comparatively moderate. On the morning of the third, a lull of an hour or so enticed us to bundle up and lash our sleigh. No sooner had we done this and proceeded a short distance, than the gale came on with redoubled fury, in consequence of which we had to hasten back to our snow retreat, and were glad enough to have been still so near a shelter when caught by it, as we had much difficulty in keeping on our feet from the violence of the whirling eddies that came sweeping along an exposed headland near us. Such was the force of the wind, that column after column of whirling spray was raised by it out of a continuous lane of water, more than a mile broad, which the present gale had opened out along the coast, at the distance of only a few yards from our present encampment. As these successive columns were lifted out of the water, they were borne onward with a speed scarcely less rapid than the 'wings of the wind' itself. Whilst detained here, we narrowly escaped being buried by an infant avalanche. A hardened mass of snow of several tons weight having been disengaged from the summit of the cliff above us by the sweeping winds, came rolling down with a noise that told fearfully of its approach. In its descent it carried along with it several fragments of rock that lay in its path, and at length, being able to advance no

Violence of the gales.

Narrow escape.

farther, lodged itself within a few yards of our present dwelling, after ploughing up a bed for itself in the hard packed snow before it, and doing us no other harm than scattering a few harmless masses of snow about the base of our encampment."

Badness of the roads.

So severe, indeed, did this part of the road prove to be, that the sledges, moccasins, and snow-shoes, were very severely damaged, and, on the whole party being collected at Fury Beach, it was found necessary to send back to the ship for additional supplies. They were much indebted here to the old stores of the Fury, which were found to be in excellent preservation, although they had lain for thirty years exposed to the weather on the shores of these icy seas.

The journey on which they had now entered would occupy, it was supposed, about three months, during which time they hoped to survey upwards of a thousand miles. It was found upon calculation that six men could not carry a sufficient quantity of provisions to sustain them for so long a period, so the plan was adopted of taking fourteen men as far as Brentford Bay, from which point eight of the travellers were to return to the ship, while the remaining six would proceed onwards with as much as they could possibly drag or carry of the necessaries of life.

Their provisions and equipments from Fury Beach were as follows:—

Provisions for the journey.

	lbs.
8 1-3d cases of pemmican, each 90 lbs.,	750
4 bags of biscuit, each 75 lbs.,	300
1 small sack of flour,	30
3 bags of coal, each 40 lbs.,	120
Several bundles of firewood, about	112
3 tin cases spirits of wine, say 5 gallons,	25
A case of ammunition, knives, files, books, &c., intended for the Esquimaux,	60
1 bag containing astronomical instruments, books, &c.,	30
Several bags containing bedding, sugar and tea, guns, axes, saws, cutlasses, kettles, pots and pans,	200
In all about	1627

CHAP. XII.

This, with the tackling and sledges, made altogether a total dead weight of about 2000 lbs, the whole being lashed down, to the smallest possible compass, on four flat-bottomed Indian sleighs, two of which were drawn by the five dogs, assisted by two of the men, the other two being dragged by the rest of the party.

It was a fine clear mild day when they started, and they found the travelling very good at first, the beach being flat and the ice sufficiently smooth to admit of proceeding with facility. Fortune, however, seldom favours Arctic travellers long. They soon found their bright sky overcast, and the mild breeze changed into a cold, bitter, frosty gale. Under these circumstances they travelled from day to day, enduring it as stoically as possible, and making up to some extent for their discomfort while travelling by enjoying themselves beneath their snow-burrows during the few hours allotted to repose. The frost-biting of their faces, however, became at last so intolerable, that they fell upon the expedient of protecting the parts most vulnerable by means of sundry curious and original kinds of coverings. "For the eyes," says Kennedy, "we had goggles of glass, of wire-gauze, of crape, or of plain wood with a slit in the centre, in the manner of the Esquimaux. For the face, some had cloth-masks, with neat little crevices for the mouth, nose, and eyes; others were muffled up in the ordinary chin-cloth, and, for that most troublesome of the facial members—the nose (which I verily believe was made only to be frozen), a strong party, with our always original carpenter at their head, had gutta-percha noses, lined with delicate soft flannel, which warmed one's heart to look at." Like many other human inventions, these contrivances did admirable in theory, but proved complete failures in practice; and they were ultimately discarded as nuisances, with the exception of the chin-cloths and goggles, which held their ground to the last.

Frost-bitten faces.

Ingenious devices.

The daily routine of operations was as follows:—

They rose at six, but did not *dress;* having slept in their clothes, that operation was rendered unnecessary: then they breakfasted; after which came the bundling up and lashing of the sledges, and harnessing the dogs—the latter operation always being accomplished amidst considerable uproar. Then came the start—the comical blinking of the still sleepy eyelids, and the sluggish unwilling motion of still wearied, and but half-roused limbs; and they soon left the night's encampment far behind, M. Kennedy leading the way, Mr. Bellot following, and the party in a string bringing up the rear. So on they went, over hill and dale and along shore from morn till night, stopping every hour for five minutes to rest the men and breathe the dogs, and halting, when opportunity offered, to find their latitude and longitude. The construction of a snow-hut, and consumption of the evening meal, concluded the labours of the day, which were seldom over before nine or ten at night.

Routine of the journey.

On the 6th of April, the fatigue party began their retrograde journey to the ship. At this point they discovered a strait running westward, which was found to separate North Somerset from Boothia Felix, and was named Bellot Strait, in honour of the gallant young Frenchman, who had secured the affectionate regard not only of the leader of the party, but also of all the men. Thence they crossed over Victoria Strait to Prince of Wales Land, naming the most prominent headlands, bays, and islands, as they went along. Numerous tracks of deer, wolves, bears, and musk-oxen were seen, but none of the animals themselves, except one bear, which came incautiously close to the snow-hut, and was chased away by the dogs. During a great portion of the journey, they were much annoyed by snow-blindness, caused by the fierce glare of the sun upon the snow, and this was rendered all the more unbearable by the sharp winds which prevailed so much, and dashed the drift into their eyes. The

Fatigue party return.

Bellot Strait discovered

Snow-blindness.

CHAP. XII.

country over which they travelled was generally very flat, rendering it a matter of no small difficulty to keep their westerly course, the compasses being of little use in such close proximity to the magnetic pole. Their great hope in travelling westward was that they should meet with a sea which would conduct them northward to Cape Walker, and so enable them to ascertain whether or not there was any promising western channel or strait through which Franklin might have penetrated. After thirteen days' marching, however, they reached the hundredth degree of west longitude without meeting with the wished-for ocean, so it was resolved to turn their steps northward. "Being now satisfied," says Kennedy, "that Sir James Ross had, in his land journey along the western shore of North Somerset in 1849, mistaken the very low and level land over which we had been travelling for a western sea, I felt no longer justified in continuing a western course. Whatever passage might exist to the south-west of Cape Walker, I felt assured must now be on our north. I determined, therefore, from this time forward, to direct our course northward, until we should fall upon some channel which we knew must exist not far from us, in this direction, by which Franklin might have passed to the south-west."

Hopes and disappointments.

The weather still continued boisterous and changeable. The channel of which they were in search was nowhere to be found. Scurvy, too, began to show itself among the men, so it was resolved to turn eastward again and proceed towards the channel laid down to the east of Cape Bunny, which they resolved to follow up to Cape Walker.

Symptoms of scurvy.

During the march they met several herds of deer, and succeeded in shooting a few brace of ptarmigan. As they had no means of cooking them, however, they adopted the practice, common among Indians, of *freezing* them, and, while in this state, eating them raw; and we are assured that "a frozen ptarmigan, after a hard

day's march, is by no means an unwelcome addition to an Arctic traveller's bill of fare!" An incident of a kind that might have turned out serious, occurred at this time.—"As I was proceeding in advance of the party," says Kennedy, "with the view of selecting the most level track for sleighs, I was alarmed by a cry from the men that Richard Webb's feet were frozen. Sure enough, on placing the poor fellow on the sleigh, and stripping off his moccasins, both feet were as cold as two lumps of ice, and one already slightly frozen. I immediately caused the men to form a circle round him to protect him from the wind, while John Smith and myself proceeded to restore circulation by rubbing the affected parts well over with snow. This done, I pulled out a pair of warm dry moccasins, which I always carried under my belt, ready for next day's wear; and John Smith supplied a pair of dry socks out of his bosom. As soon as these had been drawn on, and poor Dicky placed on his legs again, we were ready for a fresh start, and in less than a quarter of an hour we were all once more on the march, and our patient as lively and vigorous as ever."

Feet nearly frozen.

At last they arrived at Cape Walker. Its bold and conspicuous headland first met their gaze on the 4th of May; but here, as at Fury Beach, they were doomed to meet with disappointment. Not a sign of Franklin's expedition having visited the spot was to be met with. Mr. Bellot carefully followed the windings of the rough ice outside the beach in order to have a commanding view of the cliffs, while Mr. Kennedy searched along shore, but all without success. Their stock of provisions was now getting very low, obliging them to go on short allowance; and, to make it last longer, they fed the dogs from this time forward on "old leather shoes, and fag-ends of buffalo robes!" We should feel somewhat inclined to charge our travellers with cruelty to animals when we read this, were we not farther assured by Mr. Kennedy that they not only lived, but thrived

Arrive at Cape Walker.

CHAP. XII.

wonderfully on this *food;* and that "one old snarling brute, that had been called Boatswain, by the men, in consequence of his fierce, ill nature, never seemed thoroughly to enjoy his meals till put upon a course of old shoes!"

Opportune discovery of provisions.

From this time they grew worse and worse with scurvy, but were much revived by lighting upon a small depôt of provisions, which had been left near Cape M'Clintock by Sir James Ross in 1849. This enabled them to start again with vigour for Whaler Point, which they reached on the 15th, and at which place they remained until the 27th, making free use of the lime-juice, cranberries, &c., which were deposited there. After being sufficiently restored, they started on their return to the ship, which they finally reached on the 30th of May, having been absent ninety-seven days, during which time they had traversed about 1100 miles.

Return to England.

Nothing now remained to be done but to get the ship clear of the ice as soon as possible, and return to England. This, however, was not easily accomplished. There was little in the appearance of ice or land to indicate that June had arrived, except the falling in of some of the snow-houses which had been erected around the ship. Gradually, however, the fierce glare of the dog-days began to tell upon the face of nature, and finally carried all before it; liberating them from the cold embraces of Batty Bay on the 6th of August. On the 19th, they got comparatively clear of the ice, and finally hoisted their sails to a favouring breeze, which soon carried them into the broad Atlantic, and wafted them in safety to the shores of Britain, which they reached on the 7th of October.

"I cannot," writes Mr. Kennedy, at the conclusion of his extremely interesting journal, "close this brief narrative of a voyage, accomplished under unusual difficulties, and in the absence of many appliances possessed by others engaged in the prosecution of an

extensive exploration of the Arctic Seas, without recording here, first, my gratitude to the Almighty for the protection he has in his mercy vouchsafed to us; and my obligations to the crew of our little vessel, by whose hardihood, perseverance, and uniform good conduct alone, we were enabled to effect what we did. To Mr. Bellot, my constant companion, not only do I owe the most valuable assistance from his scientific attainments; but his amiable qualities have cemented a deep personal regard, which can end only with my life."

CHAPTER XIII.

Discovery of the North-West Passage, and News of Franklin's Party.

Sir Edward Belcher's Position and Prospects—New Expedition—Injustice to the Americans—Return of Captain Inglefield, and News of the Discovery of the North-West Passage—Narrative of M'Clure's Voyage—Meeting between M'Clure and Kellet—Sir E. Belcher's Squadron—More Traces of Franklin's Route Discovered—Melancholy Death of Lieutenant Bellot—Dr. Rae's Return with News of the Discovery of Part of the Franklin Expedition, and Articles belonging to Sir J. Franklin and Party, found in the hands of the Esquimaux.

CHAP XIII. ALTHOUGH the expedition under Mr. Kennedy failed to accomplish the principal object for which it had been fitted out, it had done something in the way of adding to our knowledge of these desolate coasts in a geographical point of view, and had brought home cheering intelligence of the progress of the searching squadron, which sailed, as mentioned at the beginning of the last chapter, under Sir Edward Belcher, and which had proceeded up Wellington Channel so early as the month of August 1852. Captain Kellet had also been successful in advancing towards Melville Island, which he hoped to reach before the winter set in.

Expedition of Sir E. Belcher in Wellington Channel.

In the beginning of 1852, various rumours arose as to the fate of the missing ships. One of these was to the

effect, that two vessels, supposed to be the Erebus and Terror, had been seen by an American trader set fast in an iceberg in the North Atlantic, apparently abandoned by their crews. Another, was the story (already alluded to) invented by the Esquimaux interpreter of Sir John Ross, who said that Franklin and his crews had been murdered at an Esquimaux settlement at Wolstenholme Sound, on the north of Baffin's Bay. The story was believed by Sir John Ross himself, and obtained some credence for a time, but was proved afterwards to be a mere fabrication.

Rumours regarding Franklin.

In consequence of this last rumour, however, Lady Franklin refitted the Isabel screw-steamer, and sent her out under Commander Inglefield, R.N., to ascertain the truth of the story. After an absence of four months, he returned, having made a minute examination of both coasts of Baffin's Bay and the settlement at Wolstenholme Sound, without discovering anything to indicate the occurrence of such a tragical event there.

Inglefield Expedition.

In the beginning of the year 1853, three expeditions were fitted out, partly to continue the search, and partly to reinforce the vessels already in the field of action. The Rattlesnake, under Commander Trollope, and the Isabel screw-steamer—again refitted by Lady Franklin, and placed under the command of Mr. Kennedy—sailed for Behring's Straits, in order to carry supplies to Captains Collinson and M'Clure. Mr. Rae was again despatched to the Isthmus of Boothia, to make a further examination of the coast in that quarter; and Commander Inglefield was sent to Barrow's Straits with the Phœnix and the Lady Franklin, to reinforce the squadron under Sir E. Belcher. Mr. Grinnell, of New York, also fitted out an expedition, and sent it to explore the passages leading out of Baffin's Bay into the unknown ocean around the Pole.

New Expeditions.

It may not be out of place here, perhaps, to make a few remarks on the injustice which has been done to America by England, in regard to the discoveries in Wellington Channel during the autumn of 1850. In

Injustice to America.

CHAP. XIII.

September of that year, the vessels sent out by Mr. Grinnell of New York were carried northwards and up the channel, past all the points hitherto discovered, until they reached lat. 75° 25′, when they saw land to the north, which was named *Grinnell Land* by Lieutenant De Haven, who commanded the expedition. The following year (1851), this same land was seen by Captain Penny, and named by him *Albert Land*. Of course it was supposed by the Americans that when the fact was made known that this land had been discovered by De Haven about eight months before it was reached by Captain Penny, the name of "Albert" would be dropped, and that of "Grinnell" substituted. This, however, was not done. A strange, and, certainly, not a very honourable feeling of jealousy seems to have induced the Admiralty and the Geographical Society to shut their eyes to the fact that the discovery of this land was due to the Americans, that it was proved to have been by them discovered, by the official report of Lieutenant De Haven—a gentleman who, we have every reason to believe, was eminently qualified for the service in which he was engaged—by the journal of Dr. Kane, the narrative of Mr. Griffin, and the logs of the American ships; and, notwithstanding all this, the disputed territory now stands on the English maps as *Albert Land*. To enter into minute particulars regarding this matter, is impossible here. The question is taken up and fully elaborated in a pamphlet by Colonel Peter Force, who shows, very clearly, that the honour of the discovery of Grinnell Land is due to the American flag. Among other things that strike us, in reading this pamphlet, is the somewhat cool and presumptuous way in which it is assumed that the land discovered by De Haven was Baillie Hamilton Island, thereby insinuating that that gentleman, though an able officer in the American navy, was incompetent to ascertain his true position. It was attempted also to show that this same land was

The British Admiralty.

Colonel Force's pamphlet.

discovered by Captain Ommanney on the 25th of August 1850—an attempt which has, however, been frustrated by that gentleman's own journal, which asserts that on that day no land was visible northward.

It is deeply to be regretted that so unjustifiable an attempt should have been made to advance the glory of the British flag at the expense of the stripes and stars of America. There is too much of this feeling of jealous rivalry between us already; but we feel assured that the British nation does not sympathize with this dishonourable action, which has been done (we hope in ignorance) under the sanction of the British Government—an action which reflects all the more discredit upon those engaged in it, when we consider that it blots from the map of North America the name of a man whose philanthropic efforts in behalf of our long-lost countryman, Sir John Franklin, are beyond all praise.

News of the discovery of North-West Passage.

In the autumn of 1853 the deep interest of the nation was once more aroused by the arrival of Captain Inglefield of the Phœnix with despatches from the Arctic Regions, conveying the intelligence that the North-West Passage had at length been discovered by Captain M'Clure of the Investigator, who had passed through Behring's Straits and sailed to within a few miles of the most westerly discoveries made from the eastern side of America, at which point he was frozen up, and where his ship was finally abandoned. No vessel has yet made the entire passage; but, from the two extreme points of discovery on either side, parties from the Investigator walked over the frozen ocean; and Lieutenant Cresswell, the bearer of despatches from Captain M'Clure, is the first who has sailed from England, entered Behring's Straits, and returned again to England by the Atlantic Ocean, having thus passed through the far-famed, much-sought-after, and at length discovered, North-West Passage.

First man who has traversed the North-West Passage.

CHAP. XIII.

As a detailed account of this event cannot but prove deeply interesting to all classes of readers, we shall endeavour to lay before them as connected a narrative as possible, quoting, as occasion may require, from the public despatches and newspapers.

Collinson and M'Clure enter the Polar Pack.

It will be remembered that Captains Collinson and M'Clure sailed for Behring's Straits in 1850, through which, in connection with the Plover and Herald, they endeavoured to pass, but without success, except in the case of the Investigator (Captain M'Clure), which was last seen on the 4th August 1850, bearing gallantly into the heart of the "Polar pack." The Enterprise (Captain Collinson) finding it impossible to follow, sailed to Hong-Kong, and wintered there; but in May 1851 returned to Behring's Straits, and succeeded in entering the ice. The Plover remained at Port Clarence as a reserve for these two vessels to fall back upon, while the Herald returned to England. From that date we remained in ignorance of the fate of these two vessels, until the arrival of the Phœnix, in 1853, put us in possession of the despatches of Captain M'Clure, and assured us of the safety of the Investigator.

On parting company with the Herald in Behring's Straits in July 1850, Captain M'Clure stood to the north-north-west with a fresh breeze, with the intention of making the ice, which was accomplished on the

Checked by ice.

2d of August. During several days, the Investigator battled with the foe—now boring through densely-packed masses, and then winding among the lanes which opened here and there as the currents or winds acted upon the pack; occasionally they struck with considerable violence, but succeeded at length in rounding Point Barrow, and discovered clear water on the afternoon of the 7th—so far a-head, however, that it could only be seen from the "crow's nest." Hundreds of walrusses were seen huddled together on the ice like sheep in a fold.

"The wind," writes M'Clure, "almost immediately failing, the boats were all manned, and towing commenced amid songs and cheers, which continued with unabated good humour for six hours, when their laborious work was brought to a successful termination. Being in perfectly clear water in Smith's Bay, a light air springing up, we worked to the eastward. At two A.M. of the 8th, being off Point Drew, sent Mr. Court (second master) on shore to erect a cairn, and bury a notice of our having passed. Upon landing, we were met by three natives, who at first were very timid; but upon exchanging signs of friendship, which consisted of raising the arms three times over the head, they approached the boat, and after the pleasant salutation of rubbing noses, became very communicative; when, by the assistance of our valuable interpreter, Mr. Miertsching, we found the tribe consisted of ten tents (this being the only approach to their numbers he could obtain), that they had arrived only three days previously, and that they hold communication with a party inland, who trade with the Russian Fur Company. The evening before, they had observed us, but could not imagine what large trees were moving about (our masts), and all the tribe had assembled on the beach to look at them, when they agreed that it was something very extraordinary, and left the three men who met the boat, to watch! They also gave the pleasing intelligence that we should find open water along the coast from about three to five miles distant during the summer: that the heavy ice very seldom came in, or never left the land farther than at present: that they did not know if there were any islands farther north, as they found it impossible to go in their kayacks, when in pursuit of seals, farther than one day's journey to the main ice, and then the lanes of water allowed of their proceeding three quarters of a day farther, which brought them to very large and high ice, with not space enough in any part of it to allow

Meet with natives.

Information regarding the ice.

CHAP. XIII.

their kayacks to enter. The probable distance, Mr. Miertsching therefore estimates, from his knowledge of the Esquimaux habits, to be about forty miles off-shore, and, from what I have seen of the pack, I am inclined to think this is perfectly correct, for a more unbroken mass I never witnessed."

M'Clure's opinion regarding Franklin.

The natives who were here met with had spent their lives between the Coppermine River and Point Barrow, and, from the circumstance of their not having met with any of Franklin's party, Captain M'Clure concluded that they could not have been lost on these shores. "The coast," says he, "is inhabited throughout, and the natives are, to all appearance, a kind and merry race; and, when we gave them presents, through the medium of the interpreter, we told them that we were looking for our lost brothers, and if they saw any white men in distress, they were to be very kind, to which they assented by saying that they would, and give them 'plenty of deer's flesh.'"

So narrow was the passage of open water between the ice and the shore, along which the Investigator had to pass, that she had great difficulty sometimes in tacking,—requiring to do so, in some places, nearly every ten minutes; and, on one occasion, they actually took the ground while "in stays." Fortunately, the bottom was soft clay, and they hove off again immediately. Gradually, however, the lane widened, the reaches became longer and longer, and all apprehension of being forced on shore was soon over. On the 10th, they passed the mouth of the Colville River, whose influence was found to extend twelve or fourteen miles out to sea; the surface, at that distance from shore, being of a dirty mud colour, and scarcely salt. At this part of the coast, they again fell in with natives, who came off in two *baidars* to the number of thirty. A very animated and curious scene ensued.—A vigorous barter was immediately commenced, after the curiosity of the wondering Esquimaux with regard to the ship was

Ship touches the ground.

satisfied. Their imitative propensity was rather oddly brought into play during the traffic. Seeing the sailors cut the tobacco into pieces, to give in exchange for salmon-trout, they at once began to do the same with the fish! but were soon checked in this, and were obliged to succumb to the white men. During the afternoon, while standing along a low flat island, a pair of sealskin inexpressibles were observed fluttering from the top of a pole, held up by a number of natives, who took this method of intimating their desire to receive a visit. In obedience to the signal, the boats were lowered, and pulled in to the shore. The Esquimaux appeared to regret their temerity, however, for on the near approach of the sailors, the inexpressibles were dropt, and the whole tribe fled. As usual, however, they regained courage on observing the friendly gesticulations of the white men, and soon approached them, tossing up their arms, and making other signs of friendship; ending at last by rubbing noses with, and affectionately embracing, the gallant tars. These poor people had never seen white men before: they had no article of European manufacture about their persons, and spent their lives in hunting walrusses and seals on these low islands during the summer months—retiring to their warm residences on the mainland during winter. After holding some communication with them, through the medium of the interpreter, Captain M'Clure left them, having first made them a few presents, and, among other things, a boat's ensign, in commemoration of the first man-of-war whose flag has floated over these sterile regions. The magnificence of this latter gift quite astounded them, and caused them to rush tumultuously to their canoes to carry it off to their women, who were encamped on another island close at hand.

Interesting meetings with Esquimaux.

Coasting along, as they found opportunity, they advanced slowly—sometimes in clear, sometimes in foggy weather—sometimes with much, and sometimes with little water, till the morning of the 13th, when the

CHAP. XIII.

ice closed round, and hemmed them in completely. In this dilemma, the boats were sent to sound, and shortly returned, reporting a practicable passage in three fathoms water. Unfortunately, they hit on a spot with only two and a half fathoms, and so were soon fast a-ground. As it turned out, however, the bottom was sandy, so that no damage was done to the ship; but, unfortunately, one of the whale boats, which contained part of the cargo taken out to lighten the vessel, upset, and eleven casks of salt beef were lost. This was a serious loss at such a time. After five hours' hard work, they got once more into deep water.

Ship gets a-ground.

Navigation difficult, owing to fogs.

In this way, they continued to coast along the margin of the pack for about four or five hundred miles, when it became somewhat more open, and it was resolved to shape a course to the north-north-west for Banks' Land. In doing this, however, they were frequently obliged to alter, and often to retrace their course, owing to the deceptive nature of the lanes of water, and the perplexing fogs that constantly prevailed, obliging them to proceed chiefly by soundings. On the 21st of August, they passed the mouth of the Mackenzie River, and made the Pelly Islands. Soon after, they reached Warren Point, where natives were seen on the shore; and as Captain M'Clure wished to forward despatches by them, if possible, to the Hudson's Bay Company's posts on the Mackenzie, the boats were ordered out. Captain M'Clure believed the natives to have been in connection with these posts, and expected a friendly reception from them. "Great, therefore," says he, "was my surprise, upon approaching the beach, to find, instead of being greeted by the usual friendly signs, that two savages, with gesticulations the most menacing, having bended bows, with arrows on their strings, and one with a large knife, which he brandished most significantly, waved us off. Taking no heed of these hostile demonstrations, we pulled in; they retreated, yelling furiously.

Unfriendly natives.

Upon our reaching the beach, we made the same signs of friendship which we had used with the Esquimaux further west, but without any effect, until joined by the interpreter, who was in full native costume. This gave them confidence, and, upon his explaining our friendly intentions, they approached; but when within about thirty yards, remarking some muskets which the boat's crew had, their fury revived. To pacify them, they were laid upon the ground, where they became the object of a cautious examination. Still unsatisfied, they beckoned to take them to the boat. Seeing that nothing short of this would allow of any communication, I sent them away, when they approached, and permitted us to examine their bows and arrows."

It was found that these Esquimaux had no communication with the Mackenzie, in consequence of their being at war with the neighbouring tribes, and having had several skirmishes with the Indians of that quarter. This may in some measure account for their fierce dispositions—so very different from those previously met with. A flat brass button was observed suspended from the ear of one of the chiefs of this tribe, and on being questioned as to where he got it, he replied, that "it had been taken from a white man who had been killed by one of his tribe. The white man belonged to a party which had landed at Point Warren, and there built a house: nobody knew how they came, as they had no boat; but they went inland. The man killed had strayed from the party, and he (the chief) and his son had buried him upon a hill at a little distance." No satisfactory or intelligible reply could be got as to when this event occurred. Captain M'Clure remained at this place for a short time to investigate the matter, but only found two huts, which, from the rottenness of the wood of which they were built, appeared to be of a very old date indeed. The grave of the white man was not found.

Strange story regarding a party of white men.

All along this coast, they met with parties of natives,

CHAP. XIII.

who almost invariably showed a hostile front on their first appearance, and as invariably became amicable after a little coquetting. In these interviews, they had frequently curious scenes, especially in the distribution of presents to some natives near Cape Bathurst, who could scarcely be restrained when the gaudy gifts were presented to their longing eyes. Mr. Miertsching, the interpreter, was always of the greatest use on these occasions, and won so much the esteem of one old chief, that, in the fulness of his heart, he prayed him to stay with the tribe for ever; and, by way of inducement to do so, presented him with his daughter, a pretty girl of about fifteen, to be his wife, assuring him, at the same time, that a tent, and all the etceteras of an Esquimaux establishment, should be given to him along with her! They were frequently invited to partake of native hospitality in the shape of roasted whale and venison, besides salmon, blubber, and other Arctic delicacies.

The interpreter tempted to remain with the Esquimaux!

Great numbers of whales were seen about this time, and a Polar bear was also observed on a fragment of ice. On the 5th of September, the hopes of the navigators were suddenly raised, and as speedily cast down again, in the following manner:—"The weather, which had been squally, accompanied by a thick fog during the early part of the day, cleared towards noon, when a large volume of smoke was observed about twelve miles south-west. . . . As divers opinions were in circulation respecting its probable cause, and the ice-mate having positively reported that from the crow's nest he could distinguish several persons moving about, dressed in white shirts, and observed some white tents in the hollow of the cliff, I certainly had every reason to imagine they were a party of Europeans in distress, convinced that no travellers would remain for so long a period as we had remarked the smoke, for their pleasure: therefore, to satisfy myself, equally as others, I determined to send a boat on shore, as it was

Hopes suddenly raised and cast down.

now calm. The first whale boat, under Lieutenant Cresswell, with Dr. Armstrong and Mr. Miertsching, was despatched to examine into the cause, who, on their return, reported the smoke to emanate from fifteen small mounds of volcanic appearance, occupying a space of about fifty yards, the place strongly impregnated with sulphur, the lower mounds being about thirty feet above the sea-level, the highest about fifty feet. The land in its vicinity was blue clay, much intersected with ravines and deep watercourses, varying in elevation from 300 to 500 feet: the mark of a reindeer was traced to a small pond of water immediately above the mounds. Notice of our having landed was left, which would not long remain, as the cliff is evidently rapidly crumbling away. Thus the mystery of the white shirts and tents was most satisfactorily explained."

Volcanic mounds.

At four A.M. of the 6th, they were off the small islands, near Cape Parry, bearing north-east-by-north, with a fine westerly breeze. The same day, high land was observed on the port-bow, on the western shore of which the main body of the ice rested. This was the first sight obtained of *terra incognita*. Hitherto they had been sailing along a shore which had in former years been surveyed, on foot and in boats, by Franklin, Back, Dease, Simpson, and others; although, indeed, theirs was the first *ship* that had sailed in these waters; but the land which now appeared to them on the left bow was quite new. Accordingly, they hove to; and, with the first whale boat and cutter, landed and took possession in the name of Her Most Gracious Majesty, calling it "Baring's Island," in honour of the first lord of the Admiralty. The south cape of this land was a fine bold headland, rising almost perpendicularly to the height of about a thousand feet, and was named "Lord Nelson's Head." The latitude was found to be 71° 6′ north, longitude 123° 0′ west. A note of their progress being deposited here, they returned to

New land discovered.

Baring's Island taken possession of.

CHAP XIII.

the ship and sailed along the eastern coast, as being freer from ice than that on the west. It was afterwards found that the island now taken possession of was the one whose extreme north-eastern shore had been faintly seen and named "Banks' Land" by Parry in 1820.

"We observed," writes M'Clure, "numerous traces of rein-deer, hare, and wild-fowl; moss, and divers species of wild-flowers, were also in great abundance; many specimens of them, equally as of other subjects of interest to the naturalist, were selected with much care by Dr. Armstrong. From an elevation obtained of about 500 feet, we had a fine view towards the interior, which was well clothed with moss, giving a verdant appearance to the ranges of hills that rose gradually to between 2000 and 3000 feet, intersected with ravines, which must convey a copious supply of water to a large lake situated in the centre of a wide plain, about fifteen miles distant: the sight to seaward was favourable in the extreme; open water, with a very small quantity of ice, for the distance of full forty miles towards the east, insured good progress in that direction. The weather becoming foggy, our lead was the only guide until ten A.M. of the 9th; it then cleared for a short time, when land was observed to the eastward, about fifteen miles distant, extending to the northward as far as the eye could reach. The mountains in the interior are lofty and snow-covered, while the low ground is quite free. Several very remarkable peaks were discernible, apparently of volcanic origin. This discovery was named Prince Albert's Land. . . . The wind becoming fair, and weather clearing, all the studding-sails were set, with the hope of reaching Barrow's Strait, from which we were now distant about seventy miles. The water was tolerably clear in that direction, although much ice was lying against the western land; . . . . much loose ice was also in motion, and, while endeavouring to run between two floes, at the

Appearance of the new country.

Snow-clad mountains in the interior.

rate of four knots, they closed so rapidly, one upon either beam, that our way was instantly stopped, and the vessel lifted considerably; in this position we were retained a quarter of an hour, when the pressure eased, and we proceeded. Our advance was of short duration, as at two P.M. the wind suddenly shifted to the north-east, and began to freshen; the water, which a few hours previous had excited sanguine hopes of a good run, became soon so thickly studded with floes, that about four P.M. there was scarcely sufficient to keep the ship freed; this by much exertion was however effected until two A.M. of the 14th, when we were beset."

Beset by ice.

From this time forward, baffling winds and impenetrable floes of ice conspired to retard the progress of the Investigator. They frequently ran great risk of being cut in two, or crushed by the rushes of ice which assailed them in the narrow strait along which they were sailing; and more than once the good ship was placed in one of those terrible predicaments in which man's power is vain, and the Arm of God alone can save. But that Arm was not wanting in the time of need, and the vessel was carried forward in safety till the 17th of September, when the wind, which had been light, gradually died away, and they were almost immediately beset. "There were several heavy floes in the vicinity; one, full six miles in length, passed at the rate of two knots, crushing everything that impeded its progress, and grazed our starboard-bow. Fortunately, there was but young ice upon the opposite side, which yielded to the pressure: had it otherwise occurred, the vessel must inevitably have been cut asunder. In the afternoon, we secured to a moderately sized piece, drawing eight fathoms, which appeared to offer a fair refuge, and from which we never afterwards parted."

Baffling winds.

Narrow escape.

To this lump of ice the Investigator clung with the tenacity of a bosom-friend, and followed it, literally, through thick and thin! There is something almost ludicrous, as well as striking, in M'Clure's account of

CHAP. XIII.

their connexion with this bit of ice. "It conveyed us," says he, "to our farthest north-east position, lat. 73° 7′ north, long. 117° 10′ west, back round the Princess Royal Islands; passed the largest within 500 yards to lat. 72° 42′ north, long. 118° 42′ west, returning along the coast of Prince Albert's Land, and finally freezing in at lat. 72° 50′ north, long. 117° 55′ west, upon the 30th of September, during which circumnavigation we received many severe nips, and were frequently driven close to the shore, from which our deep friend kept us off. To avoid separation, we had secured with two stream-cables, one chain, two six and two five-inch hawsers. As our exposed position rendered every precaution necessary, we got upon deck twelve months' provisions, with tents, warm clothing, &c., and issued to each person a pair of carpet-boots and a blanket-bag, so that in the event of any emergency rendering it imperative to quit the vessel, we might not be destitute. On the 8th of October, our perplexities terminated with a nip that lifted the vessel a foot, and heeled her 4° to port, in consequence of a large tongue getting beneath her, in which position we quietly remained."

Extraordinary drift with an iceberg.

Here the Investigator passed the winter of 1850-51, during which season a journey was made over the ice to the shores of Barrow's Strait, which they found to be connected with the strait in which they wintered; thus establishing the fact of the existence of a North-West Passage in that direction. Various other journeys with sledges were undertaken along the shores of Baring Island towards Banks' Land, with which it was found to be connected; and also towards the southern extremity of the island, and along the shores of Prince Albert's Land, but without the slightest trace of Sir John Franklin's party being met with. In these excursions, they frequently found traces of Esquimaux, who seem to have inhabited the island in great numbers many years ago. Only one party was met with, however, from whom they obtained no information

Traces of inhabitants long ago.

worthy of record. The only other inhabitants of the soil with whom they met, were deer, musk oxen, and bears. One of these last, on being opened, was found to have dined on raisins, tobacco, pork, and adhesive plaster! This extraordinary medley led Captain M'Clure to suppose that the Enterprise must be near, and a search was instituted accordingly, which only resulted in the discovery of a preserved meat canister, containing similar articles, and from which Bruin, doubtless, had procured his curious meal.

A bear's dinner!

On the 13th of June 1851, all the sledge-parties had returned in safety to the ship, and everything was in readiness to set sail, the instant the huge barriers of ice, with which they were surrounded, should set them free.

The account of the commencement of operations in spring is full of interest. We give it in M'Clure's own words. "The first indication of open water," says he, "occurred to-day (July 7th), extending some distance along the shore of Prince Albert's Land, about a mile in width; the ice in every direction is so rapidly decaying, being much accelerated by sleet and rain, with a thermometer standing at forty-five degrees, that, by the 14th, that which for the last few days had been slightly in motion, with large spaces of water intervening, suddenly and noiselessly opened around the vessel, leaving her in a pond of forty yards; but seeing no possibility of getting without its limits, we were compelled to secure to the floe which had for ten months befriended us, and, with the whole of the pack, gradually drifted to the southward, towards the Princess Royal Islands, which we passed on the eastern side within half a mile. Upon the 17th, at ten A.M., being among loose ice, we cast off from the floe and made sail, with the hope of getting upon the western shore where the water appeared to be making, but without shipping the rudder, in consequence of being in the vicinity of several large floes, and at two P.M. again

Commencement of spring.

Disruption of the ice.

CHAP. XIII.

secured to a floe between the Princess Royal and Baring's Islands (we passed over a shoal having nineteen fathoms). On the 20th, at half-past eleven A.M., a light air sprang up from the south-west, which, slacking the ice, gave hopes of making progress to the north-east, in which direction I was anxious to get for the purpose of entering Barrow's Strait, that, according to circumstances, I might be enabled to carry out my original intentions of proceeding to the northward of Melville Island, as detailed in my letter to the Secretary of the Admiralty, of July 20, 1850; or, should such not be practicable, return to England through the strait. The ship was cast off, and a mile gained, when the wind died away, and we were again beset. On the morning of the 22d, open water appearing in the north-east, the rudder was shipped in expectation of a start, which was not, however, realized until the afternoon of the 23d, when a light south-west wind set the ice to the north-east, carrying us over a shoal upon which there was much ice grounded in thirteen fathoms; the corner of the floe to which we were attached coming in contact with some of these masses, gave way, throwing pieces of twelve and fourteen feet square completely out of the water. It grazed the hard bottom with a sound not unlike distant thunder, as it crashed, crumbled, and upheaved, throwing an enormous mound up in its centre, as if under the influence of volcanic agency, and then rent asunder, the part we were secured to remaining firmly grounded, while the other and lighter portion, being forced onwards with accelerated speed, came direct for our unprotected stern. To let go warps and anchors was but the work of a minute, and most fortunate were we in accomplishing it, as, ere they could be got on board, it struck the stern, forcing the ship ahead at the rate of two knots. A small space of open water, occasioned by the grounding of the floe, allowed of our advance; when, by warping and towing, we speedily got beyond its influence. Had

Ship drifted about by the pack.

Terrible rush of ice against the ship.

our position been less favourable, nothing could have saved the vessel from momentary destruction, and at half-past eleven P.M., with a breeze from the south-east, we made sail through large leads of water towards the eastern side of the strait, and by the afternoon of the 24th, had nearly reached Point Armstrong, upon which the ice was resting, where our course was checked. There was much driftwood on the beach, of large dimensions, mostly American pine. The cutter was consequently despatched for a load, and some of the pieces appeared so fresh, that Mr. Ford, the carpenter, was of opinion that two years was the extreme of their quitting the forest. The wind veering to the westward during the night, set large bodies of ice into the water we occupied, which was rapidly filling. To prevent being forced on shore, we were obliged, at eight A.M. of the 25th, to run into the pack, where we drifted, according to the tide, about a mile and a half from the beach; but, during the twenty-four hours, made about two miles and a half to the north-east, from which I am of opinion, when taken with the quantity of drift-wood that is thickly strewed along the beach, that on this side of the strait there is a slight current to the north-east, while, upon the opposite one, it sets to the southward, upon which there is scarcely any wood, and our progress, while similarly situated, was in a southern direction. We continued drifting in the pack, without meeting any obstruction, until ten A.M. of the 1st of August, when a sudden and most unexpected motion of the ice swept us with much velocity to the north-east, towards a low point off which were several shoals awash, having many heavy pieces of grounded ice upon them, towards which we were directly setting, decreasing the soundings from twenty-four to nine and a half fathoms. Destruction was, apparently, not far distant, when, most opportunely, the ice eased a little, and a fresh wind coming from the land, sail was immediately made, which, assisted by warps, enabled the ship to be forced

Drift-wood found in large quantities.

Dangers increase.

CHAP. XIII.

ahead about 200 yards, which shot us clear of ice and point into sixteen and a half fathoms, in which water we rounded the shoals; the ice then again closed, and the ship became fixed until the 14th, when the fog, which since the previous day had been very dense, cleared, and discovered open water about half a mile from the vessel, with the ice loose about her." The difficulty of clearing away large masses of ice was, to some extent, obviated by blasting. "Previously to quitting the floe, I was desirous of trying what effect blasting would have upon such a mass. A jar containing thirty-six pounds of powder was let down twelve feet into the water near the centre; the average thickness was eleven feet, and its diameter 400 yards. The result was most satisfactory, rending it in every direction, so that with the greatest ease we could effect a passage through any part of it."

Blasting the floes with gunpowder.

Notwithstanding his persevering efforts, however, Captain M'Clure failed in penetrating into Barrow's Strait, and, having been foiled in attempting this passage—the latter end of one season, and the beginning of another—he considered it altogether impracticable, except under the favourable circumstances of a continuance of westerly gales, which would drive the ice into Barrow's Strait.

Commence to coast the western shores of Baring's Island.

On the 16th of August, they finally put about with the intention of coasting round the western shores of the island, hoping to make the passage to the northward of Banks' Land.

The difficulties to be overcome, and the dangers encountered, in this attempt, may be gathered from the following extracts from the despatches:—"At four P.M. of the 18th, being off a very low spit of sand (Point Kellet), which extended to the westward for about twelve miles, in the form of a horse-shoe, having its seaside thickly studded with grounded ice, while the interior was exempt from any, I sent Mr. Court (second master) to examine it, who reported an excellent and

commodious harbour, well sheltered from north-west to south, carrying five fathoms within ten yards of the beach, which was shingle, and covered with drift-wood. A set of sights was obtained, and a cask, containing a notice, was left there. Upon the morning of the 19th, we left this low coast, and passed between two small islands lying at the entrance of what appeared a deep inlet, running east-south-east, and then turning sharp to the north-east. It had a barrier of ice extending across, which prevented any examination. Wishing to keep between the northernmost of these islands and the mainland, to avoid the pack, which was very near it, we narrowly escaped getting on shore, as a reef extended from the latter to within half a mile of the island. Fortunately, the wind being light, we rounded to with all the studding-sails set, and let go the anchor in two and a half fathoms, having about four inches to spare under the keel, and warped into four, while Mr. Court was sent to find a channel, in which he succeeded, carrying three fathoms, through which we ran for one mile, and then continued our course in eight, having from three to five miles between the ice and land. At eight P.M., we neared two other islands, the ice resting upon the westernmost, upon which the pressure must have been excessive, as large masses were forced nearly over its summit, which was upwards of forty feet. Between these and the main we ran through a channel in from nine to fifteen fathoms, when an immediate and marked change took place in the general appearance and formation of the land: it became high, precipitous, sterile, and rugged; intersected with deep ravines and watercourses, having sixty-five fathoms at a quarter of a mile, and fifteen fathoms one hundred yards from the cliffs, which proved exceedingly fortunate, as the whole pack, which had apparently only just broken from the shore, was within half a mile, and, in many places, so close to it, that, to avoid getting beset, we had nearly to touch the

Character of the coast.

Sudden change in the appearance of the land.

CHAP. XIII.

land: indeed, upon several occasions, the boats were compelled to be topped up, and poles used to keep the vessel off the grounded ice, which extends all along this coast; nor could we round to, fearful of carrying the jib-boom away against its cliffs, which here run nearly east and west. The cape forming its western extreme I have called Prince Alfred, in honour of his Royal Highness. On the morning of the 20th, our further progress was impeded by finding the ice resting upon a point, which formed a slight indentation of the shore, and was the only place where water could be seen. To prevent being carried away with the pack, which was filling up its space, we secured to the inshore side of a small but heavy piece of ice, grounded in twelve fathoms seventy-four yards from the beach —the only protection against the tremendous Polar ice (setting a knot per hour to the eastward before a fresh westerly wind), which at nine P.M. placed us in a very critical position, by a large floe striking the piece we were fast to, and causing it to oscillate so considerably, that a tongue which happened to be under our bottom, lifted the vessel six feet; but, by great attention to the anchors and warps, we succeeded in holding on during the conflict, which was continued several minutes, terminating by the floe being rent in pieces, and our being driven nearer the beach. From this until the 29th, we lay perfectly secure, but at eight A.M. of that day, the ice began suddenly to move, when a large floe, that must have caught the piece to which we were attached under one of its overhanging ledges, raised it perpendicular thirty feet, presenting to all on board a most frightful aspect. As it ascended above the foreyard, much apprehension was felt that it might be thrown completely over, when the ship must have been crushed beneath it. This suspense was but for a few minutes, as the floe rent, carrying away with it a large piece from the foundation of our asylum, when it gave several fearful rolls

Critical position of the Investigator.

Frightful convulsions among the ice.

and resumed its former position; but, no longer capable of resisting the pressure, it was hurried onward with the drifting mass. Our proximity to the shore compelled, as our only hopes of safety, the absolute necessity of holding to it; we consequently secured with a chain, stream and hemp cable, three six and two five-inch hawsers, three of which were passed round it. In this state we were forced along, sinking large pieces beneath the bottom, and sustaining a heavy strain against the stern and rudder; the latter was much damaged, but to unship it at present was impossible. At one P.M., the pressure eased, from the ice becoming stationary, when it was unhung and laid upon a large floe piece, where, by eight P.M., owing to the activity of Mr. Ford, the carpenter, who is always ready to meet any emergency, it was repaired, just as the ice began again to be in motion; but as the tackles were hooked, it was run up to the davits without further damage. We were now setting fast upon another large piece of a broken floe, grounded in nine fathoms upon the *debris* formed at the mouth of a large river. Feeling confident that, should we be caught between this and what we were fast to, the ship must inevitably go to pieces, and yet being aware that to cast off would certainly send us on the beach (from which we were never distant eighty yards), upon which the smaller ice was hurled as it came in contact with these grounded masses, I sent John Kerr (gunner's mate), under very difficult circumstances, to endeavour to reach it and effect its destruction by blasting; he could not, however, find a sufficient space of water to sink the charge, but remarking a large cavity upon the sea face of the floe, he fixed it there, which so far succeeded, that it slightly fractured it in three places, which, at the moment, was scarcely observable, from the heavy pressure it was sustaining. By this time, the vessel was within a few feet of it, and every one was on deck in anxious suspense, awaiting what was apparently the

Rudder damaged.

Endeavour to escape by blasting.

CHAP. XIII.

crisis of our fate; most fortunately, the sternpost took it so fairly, that the pressure was fore and aft, bringing the whole strength of the ship to bear; a heavy grind, which shook every mast, and caused beams and decks to complain, as she trembled to the violence of the shock, plainly indicated that the struggle would be but of short duration. At this moment the stream-cable was carried away, and several anchors drew: thinking that we had now sufficiently risked the vessel, orders were given to let go all the warps, and with that order I had made up my mind that in a few minutes she would be on the beach; but, as it was sloping, conceived she might still prove an asylum for the winter, and possibly be again got afloat; while, should she be crushed between these large grounded pieces, she must inevitably go down in ten fathoms, which would be certain destruction to all; but before the orders could be obeyed, a merciful Providence interposed, causing the ice, which had been previously weakened, to separate into three pieces, and it floated onward with the mass, our stern still tightly jammed against, but now protected by it. The vessel, which had been thrown over fifteen degrees, and risen bodily one foot eight inches, now righted and settled in the water; the only damage sustained was several sheets of copper ripped off and rolled up like a sheet of paper, but not a fastening had given way, nor does any leakage indicate the slightest defect. By midnight the ice was stationary, and everything quiet, which continued until the 10th of September; indeed, from the temperature having fallen to sixteen degrees, with all appearance of the setting in of the winter, I considered our farther progress stopped until next year."

Thrilling suspense.

Deliverance.

Hopes of farther progress given up.

From this time forward to the end of September, their course was one unvarying scene of battling against difficulties, apparently altogether insurmountable. At one time, they were forced by the ice almost ashore—at another, swept into the dangerous embrace of the

"Polar pack;"—now retarded by fogs, and blinding drifts of sleet, and sometimes grounding on, or grazing, the low shallows which stretched out from the shore on every side. On one occasion, they were almost crushed between the rushing masses of ice that descended upon them; but, through the merciful protection of an ever-watchful God, escaped with the loss of the bulwarks on one side of the ship, which were entirely swept away.

About the end of September, they reached the western extremity of Banks' Land, and, finding that it was totally impossible to advance any farther that season, they made preparations for going into winter quarters at this point. "I determined," continues M'Clure, "to make this our winter quarters, and, having remarked upon the south side of the bank on which we had grounded, a well protected bay, Mr. Court was despatched to sound it; and, shortly making the signal that there was sufficient water, we bore up, and at forty-five minutes past seven A.M., we anchored in four and a half fathoms, and that night were firmly frozen in in what has since proved a most safe and excellent harbour, which, in grateful remembrance of the many perils that we had escaped during the passage of that terrible Polar Sea, we have named the "Bay of Mercy;" thus finally terminating this short season's operations, having been actually only five entire days under way. Preparations were now made for housing in, and everything was completed by October 1st, except hauling over the cloth, which was not done, that the daylight should be enjoyed as long as possible, and a saving in lights effected. On that day, as a precautionary measure, the crew were placed upon two-thirds allowance of all species of provisions. Upon the 4th, Mr. Court was sent with a travelling-party to connect our position with that visited by Lieutenant Cresswell in May last, from which we were only distant eighteen miles. On the 7th, he returned, which service completed the search

Prepare to go into winter quarters.

Frozen in for the winter in the "Bay of Mercy."

Crew put on two-thirds allowance

CHAP. XIII.

around the entire coastline of this island; he reported open water a few miles from the shore, which, gradually extending, reached the cliffs of Banks' Land. Upon the 6th, as, with two men, he was examining a few miles to the south-eastward of his tent, the current detached the heavy grounded land-ice from its base, drifting the whole party off shore to the north-west; fortunately, being unencumbered with the sledge, they succeeded with difficulty, and by much agility, jumping from piece to piece, in regaining the shore, and that evening no ice could be remarked in the strait, the whole being set into the Polar Sea. On the 10th, Mr. Sainsbury (mate), with a travelling-party, went to examine an inlet which appeared to run some distance to the south-west from the south side of the bay, but upon the following day returned, finding it extended only twelve miles, the water shoaling, until it finally terminated in a large marsh, which, from the numerous traces of animals and wild fowl, may be considered as a favourite resort during the summer. As there appeared much game in the vicinity, and the weather continued mild, shooting-parties under Lieutenant Cresswell, Messrs. Wynniatt, Court, and Piers, and the marines, under Sergeant Wood, were established in different directions between the 9th and 23d; so that, with what was killed from the ship, our supply of fresh provisions at the commencement of the winter consisted of nine deer, fifty-three hares, and forty-four ptarmigan, all in fine condition, the former having from two to three inches of fat.

Shooting-parties sent out.

The climate and weather.

"The weather during the winter has been much more boisterous, but in each month several degrees more mild than was experienced in the Prince of Wales Strait—nearly a degree and a half farther south—last year, which, in conjunction with the animals remaining in numbers in this locality the entire winter, must, I suppose, be taken as a proof of its mildness, although lying exposed to the north-west winds, direct from the

Polar Sea, which, upon our first being frozen in, led to the anticipation of having to encounter a very severe season. In consequence of our favoured position, the crew were enabled to ramble over the hills almost daily in quest of game, and their exertions happily supplied a fresh meal of venison three times a fortnight, with the exception of about three weeks in January, when it was too dark for shooting. The small game, such as ptarmigan and hares, being scarce, were allowed to be retained by the sportsmen as private property. This healthy and exhilarating exercise kept us all well and in excellent spirits during another tedious winter, so that on the 1st of April we had upwards of 1000 pounds of venison hanging at the yard-arms.

Party cross the ice to Melville Island.

All wearing so fair an aspect, and being desirous of visiting Winter Harbour, Melville Island, with the hope of meeting an officer there with whom arrangements might be made in the event of any accident occurring, which would render it necessary to quit the ship, I proceeded on the 11th with Mr. Court (second master) and a sledge-party for that port; but in consequence of thick weather coming on a few hours after leaving the vessel, and continuing unintermittingly for several days, we did not reach until the 28th. Upon the 15th, we observed a very lofty cape, bearing north-east-by-east thirty miles, which I have called Queen Victoria, in honour of Her Most Gracious Majesty (the same which had been remarked last autumn from the high land near the ship). The land to the north-east forms the bottom of Lyddon Gulf, while that upon its western side stretched to the north-west in one unbroken mountain line as far as the eye could reach.

Winter Harbour reached and North-West Passage accomplished *on foot*.

At Winter Harbour we obtained a set of sights for the purpose of testing our chronometers, which were ascertained to be going exceedingly well; and having deposited a notice of our visit under the same cairn where Lieutenant M'Clintock left one last year, upon a large fragment of sandstone, bearing this inscription

CHAP. XIII. —namely, 'His Britannic Majesty's ships Hecla and Griper, Commanders Parry and Lyddon, wintered in the adjacent harbour during the winter of 1819-20, A. Fisher, sculpsit.' At six P.M. commenced our return, travelling upon flat ice nearly the entire way, accomplishing in ten days what occupied eighteen upon the outward trip, and reached the ship upon the 9th of May."

Captain M'Clure and his party were thus the first to complete the North-West Passage—that is to say, they were the first who had actually traversed the Polar Seas from the *westward* to that point which had already been reached, by former navigators, from the *east*.

The winter of 1851-2 was spent cheerfully by the crew of the Investigator in their far-distant home in Mercy Bay, and their health continued almost uninterruptedly good. Their time was spent much in the same way as on the previous winter; and in spring, when game of every kind abounded, they enjoyed excellent sport. Musk oxen were very numerous, and hunting these huge animals furnished them with amusement—dashed, occasionally, with a spice of adventure.

Sergeant Wood's adventure with a musk bull.

On one of these occasions, Sergeant Wood of the marines, while in pursuit of a wounded deer, unexpectedly met a couple of musk bulls, which he succeeded in killing, evincing the most soldierlike coolness and intrepidity during the entire transaction; having expended his ammunition, as one of the wounded and infuriated monsters rushed towards him, he fired his "worm" when at a few yards, but without much effect. The animal continued his advances, evidently, however, weak from loss of blood, till he had reached within six feet, when, putting his head to the ground previous to his final rush, the sergeant, as his last resource, fired his iron ramrod, which, entering behind the left shoulder, passed through the heart and out at the right flank, dropping him dead at his feet.

Summer in the Arctic Regions

Spring passed away, and summer came—at least that season of the year which *ought* to have been summer, but it was no summer to our Arctic navigators. Snow covered the ground; ice covered the sea; and all around wore the pallid and cheerless aspect of winter. True, the sun became somewhat powerful, and, occasionally, lanes of water were seen, but there was no indication of that general breaking up of the ice which alone could deliver them from their harbour. At last it became too obvious that the winter was again setting in, and all hope of deliverance during that season was consequently cut off.

No hope of deliverance.

"On the 20th of August, 1852," continues M'Clure, "the temperature fell to 27°, when the entire bay was completely frozen over, and on the 27th, to 19°, so that the whole aspect was cheerless in the extreme, the young ice being two and a half inches thick, so that the whole bay might be safely perambulated; indeed, the summer was fairly gone, for the uplands were all snow-covered, the wild fowl all departed, and the flowers, which gave cheerful variety to this bleak land, were all withered. The very season might be considered as one long sunless day, as since the latter part of May that luminary had been scarcely visible, or his influence felt, upon those icy masses which block Barrow's Strait entirely across; nor do I imagine that the Polar Sea had broken up that season, as not a drop of water had been seen in that direction. During July, and the early part of August, the crew were daily employed gathering sorrel, of which there was a great quantity upon the hills in this vicinity, and, eaten as a salad, with vinegar, or boiled, when it resembled spinach, it was found a most admirable anti-scorbutic, and a great benefit to all, being exceedingly relished; but that hardy and miserable herbage could not withstand this rigorous summer beyond the 15th of the month. For several days the ice had been perfectly stationary, and no water visible in any direction, that along the cliffs

Commencement of winter in August 1852.

CHAP. XIII.

of Banks' Land being frozen, so that I felt assured that the winter had fairly set in, and all hopes of any release this year were totally annihilated, the young ice being five inches thick. Having previously determined what course I should adopt under circumstances thus unfavourable, upon the 8th of September I announced my intentions to the crew of sending half of them to England next April, with all the officers not in charge of stores, *viâ* Baffin's Bay (taking the boat from Cape Spencer) and the Mackenzie, detaining the remainder with the hope of extricating the vessel during the summer of 1853; or, failing that, to proceed with sledges in 1854 by Port Leopold, our provisions admitting of no other arrangement. Although we had already been twelve months upon two-thirds allowance, it was necessary to make preparations for meeting eighteen months more—a very severe deprivation and constitutional test, but one which the service we were employed upon called for, the vessel being as sound as the day she entered the ice: it would therefore be discreditable to desert her in 1853, when a favourable season would run her through the Straits and admit of reaching England in safety, where the successful achievement of the long-sought-for and almost hopeless discovery of the North-West Passage would be received with a satisfaction that would amply compensate for the sacrifices made and hardships endured in its most trying and tedious accomplishment: this statement was well received, and its execution will, I hope, be carried out without difficulty."

M'Clure determines on future operations.

Resolves not to desert the ship.

The ship was banked up with snow and housed over on the 18th of November, and every preparation made for spending a third winter in this region of icy desolation. The spirits of the crew, however, did not flag. Resort was again had to the hunting expeditions which had occupied and cheered them so much in previous years, and their larder was kept well stocked with provisions. "The hares and ptarmigan have descended

from the high ground to the sea ridges, so that a supply of game has been kept up during the winter, which has enabled a fresh meal to be issued twice weekly, and the usual Christmas festivities to pass off with the greatest cheerfulness. As it was to be our last, the crew were determined to make it memorable, and their exertions were completely successful; each mess was gaily illuminated and decorated with original paintings by our lower-deck artists, exhibiting the ship in her perilous positions during the transit of the Polar Sea, and divers other subjects; but the grand features of the day were the enormous plum-puddings (some weighing twenty-six pounds), haunches of venison, hares roasted, and soup made of the same, with ptarmigan and sea pies. Such dainties in such profusion I should imagine never before graced a ship's lower-deck; any stranger, to have witnessed this scene, could but faintly imagine that he saw a crew which had passed upwards of two years in these dreary regions, and three entirely upon their own resources, enjoying such excellent health—so joyful, so happy: indeed, such a mirthful assemblage, under any circumstances, would be most gratifying to any officer; but in this lonely situation, I could not but feel deeply impressed as I contemplated the gay and plenteous sight, with the many and great mercies which a kind and beneficent Providence had extended towards us, to whom alone is due the heartfelt praises and thanksgivings of all for the great blessings which we have hitherto experienced in positions the most desolate which can be conceived."

Christmas doings.

Contentment and happiness of the crew.

So another winter passed. The spring again returned, and the season rapidly approached when the crew was to divide and the travelling parties were to set out on their long and perilous journeys on foot. That these journeys were likely to prove both long and hazardous in the extreme, could not be doubted, and their nature will be easily understood by those

CHAP. XIII.

who have perused the thrilling narratives of adventure in the American wilderness detailed by Franklin, Richardson, Back, and others.* But while M'Clure and his gallant comrades were thus about to resort to their last expedient for communicating with England, relief was at hand of which they had little expectation. It was said, at the commencement of this chapter, that Captain Kellet had in August, when last heard of, made good progress on his way to Melville Island with supplies for the relief of the Investigator and Enterprise, in case either of these vessels should have made their way from Behring's Straits to that place. On reaching Winter Harbour, the first thing they discovered was the notice deposited there at the beginning of the year by Captain M'Clure, conveying to them the assurance of the safety of the Investigator in Mercy Bay. It may be imagined with what sensations this was received by Captain Kellet and his crew, and the alacrity with which they fitted out an expedition to let them know that aid was at hand.

Kellet discovers M'Clure's notice at Winter Harbour.

The meeting of M'Clure from the west, and Lieutenant Pim from the east, with the party from the *Resolute* sent to his assistance, is thus described in a private letter from Captain Kellet:—

"This is really a red-letter day in our voyage, and shall be kept as a holiday by our heirs and successors for ever. At nine o'clock of this day, our look-out man made the signal for a party coming in from the westward: all went out to meet them, and assist them in. A second party was then seen. Dr. Domville was the first person I met. I cannot describe my feelings when he told me that Captain M'Clure was among the next party. I was not long in reaching him, and giving him many hearty shakes—no purer were ever given by two men in this world. M'Clure looks well,

* See Northern Coasts of America, and the Hudson's Bay Territories.

but is very hungry. His description of Pim's making the harbour of Mercy would have been a fine subject for the pen of Captain Marryat, were he alive.

"M'Clure and his first lieutenant were walking on the floe. Seeing a person coming very fast towards them, they supposed he was chased by a bear, or had seen a bear. Walked towards him: on getting onwards a hundred yards, they could see from his proportions that he was not one of them. Pim began to screech and throw up his hands (his face as black as my hat); this brought the captain and lieutenant to a stand, as they could not hear sufficiently to make out his language.

M'Clure meeting with Lieutenant Pim of the Herald.

"At length Pim reached the party, quite beside himself, and stammered out, on M'Clure asking him, 'Who are you, and where are you come from?' 'Lieutenant Pim, *Herald*, Captain Kellet.' This was the more inexplicable to M'Clure, as I was the last person he shook hands with in Behring's Straits. He at length found that this solitary stranger was a true Englishman—an angel of light. He says: 'He soon was seen from the ship: they had only one hatchway open, and the crew were fairly jammed there, in their endeavour to get up. The sick jumped out of their hammocks, and the crew forgot their despondency; in fact, all was changed on board the *Investigator*.'

Joyful meetings.

"M'Clure had thirty men and three officers fully prepared to leave for the depôt at Point Spencer. What a disappointment it would have been to go there and find the miserable *Mary* yacht, with four or five casks of provisions, instead of a fine large depôt!

"Another party of seven men were to have gone by M'Kenzie, with a request to the Admiralty to send out a ship to meet them at Point Leopold, in 1854. The thirty men are on their way over to me now. I shall, if possible, send them on to Beechy Island, with about ten men of my own crew, to be taken home the first opportunity.

Plans rendered unnecessary.

"*May* 2*d.*—*Investigator's* second party, consisting of Lieutenants Cresswell and Wynniatt, Mr. Piers, and Mr.

CHAP. XIII.

Miertsching, arrived, bringing two men on their sledge. They made an extraordinary passage across for men in their state. The greater part of them are affected with scurvy, but are rapidly improving."

Captain M'Clure and his men finally returned to England in 1854, having been compelled to abandon his ship in Mercy Bay, where she now lies.

Captain Inglefield, whose return in 1852 brought news of Sir E. Belcher's squadron, reports the loss of the Breadalbane transport by one of those terrible "nips" which have so frequently threatened to destroy the ships of almost all who have sailed in the Polar Seas. Mr. Fowekner (late agent for the Breadalbane) describes the catastrophe in the following words:—

Threatened destruction of the Breadalbane transport.

"*Sunday, Aug.* 21*st.*—About ten minutes past four, the ice passing the ship (Breadalbane), awoke me, and the door of my cabin, from the pressure, opened; I immediately hurriedly put on my clothes, and on getting up, found some hands on the ice endeavouring to save the boats, but they were instantly crushed to pieces; they little thought, when using their efforts to save the boats, that the ship was in so perilous a situation. I went forward to hail the *Phœnix*, for men to save the boats, and whilst doing so, the ropes by which we were secured parted, and a heavy nip took the ship, making every timber in her creak, and the ship tremble all over. I looked in the main hold, and saw the beams giving way; I hailed those on the ice, and told them of our critical situation, they not for one moment suspecting it. I then rushed to my cabin, hauled out my portmanteau on the deck, and roared like a bull to those in their beds to jump out and save their lives. The startling effect on them might be more easily imagined than described. On reaching the deck, those on the ice called out to me to jump over the side, that the ship was going over. I left my portmanteau, and jumped over the side on the loose ice; and, with difficulty, and the assistance of those on the ice, succeeded in getting on the unbroken part, with the loss of the slippers I had on when quitting

Breadalbane crushed nearly to pieces.

the vessel, with wet feet, &c.; the cold was little thought of at the exciting moment—life, not property, being the object to be saved. After being on the ice about five minutes, the timbers, &c., in the ship cracking up as matches would in the hand, it eased for a short time, and I with some others returned to the ship, with the view of saving some of our effects. Captain Inglefield now came running towards the ship. He ordered me to see if the ice was through the ship; and, on looking down in the hold, found all the beams, &c., falling about in a manner that would have been certain death to me had I ventured down there; but there was no occasion for that (I mean to ascertain the fact of the ice being through), it being too evident that the ship could not last many minutes; I then sounded the well, and found five feet in the hold, and whilst in the act of sounding, a heavier nip than before pressed out the starboard-bow, and the ice was forced right into the forecastle. Every one then abandoned the ship, with what few clothes they saved—some with only what they had on; I merely saved a portmanteau, with a few things in it. The ship now began to sink fast, and from the time her bowsprit touched the ice until her mast-heads were out of sight, did not occupy above one minute and a half. It was a very sad and unceremonious way of being turned out of our ship. From the time the first nip took her until her disappearance, did not occupy more than fifteen minutes."

Terrible effects of the "nip."

This occurred near Cape Riley, at which place they had been discharging cargo, and was witnessed by the crew of the Phœnix, in which vessel the Breadalbane's crew took refuge. It shows us how very easily a vessel may be destroyed in the Arctic Regions without a vestige being left behind to tell the tale.

Possible fate of Franklin.

But the saddest episode in Arctic history, that was brought to us by Captain Inglefield, was the death of Lieutenant Bellot—the gallant young Frenchman who acted so prominent a part in the voyage of the Prince Albert under Mr. Kennedy. Mr. Bellot's zeal and enthu-

Lieutenant Bellot's sad fate.

CHAP. XIII.

siasm had led him again into the regions of ice and snow under Captain Inglefield. While there, he volunteered to lead a party over the ice, in August 1853, to Sir Edward Belcher's squadron, which was at that time near Cape Beecher, in Wellington Channel. This party consisted of four men—namely, William Harvey, William Johnson, William Madden, and David Hook.

Party set out.

On Friday, the 12th of August, he started with his little band from Beechy Island (at which place the North Star was lying), in charge of despatches from Captain Pullen. At this season of the year, travelling on ice is always considered dangerous, both on account of its decayed condition, and its liability to separate from the shore and break up. Accordingly, Captain Pullen cautioned Mr. Bellot to keep as close to the eastern shore of Wellington Channel as possible, and provided the party with one of the light India-rubber boats, which could be easily dragged on their sledge, and without which, at such a season, it would have been very unsafe to travel. That evening they encamped about three miles from Cape Innes. Next day they made considerable progress, and, when night approached, made their bed upon the broken ice over which they had been plodding during the day. This was near Cape Bowen. On the following day, which was Sunday, they passed a crack about four feet wide, running across the channel. During all this time, no doubts were entertained as to the safeness of the ice; and Mr. Bellot, in his usual encouraging way, cheered on the men, and put his shoulder to the tracking lines, saying that he wished to get to a cape which was seen a good way ahead, and which he called Cape Grinnell. Near this it was desirable to encamp in-shore, if possible. On arriving at the cape, it was found that there was a broad belt of water between the ice and the shore. This would have been a matter of little moment had there been no wind, as they could have easily crossed it in the boat; but there was unfortunately a strong breeze blowing from the south-east, which curled up the surface of the cold black waves in a very ominous way. There was no help, however,

Pass the night on the ice.

so the boat was launched, and Mr. Bellot endeavoured to reach the shore in it alone, intending to convey a line by which the remainder of the party and the provisions might be dragged over. In this attempt he failed, the violence of the gale being too much for him; he therefore returned to the ice, and ordered Harvey and Madden to get in and attempt the passage together. This they did, and were successful in landing, after which they began the operation of passing and repassing the boat between the ice and the shore by means of lines. In this way three loads were landed from the sledge, and the party on the ice were hauling the boat off for a fourth, when Madden, who had hold of the shore-line, and was up to his middle in the water, called out suddenly that the ice was on the move, and driving off shore. It was evident that he could not hold the line longer without being dragged into deep water, so Mr. Bellot called out to him to let go, which he did. Mr. Bellot and his two men then hauled the boat on to the sledge, and ran it up to the windward side of the ice, intending to launch it there and make for the shore. Ere this could be accomplished, however, the ice, whose motion was rapidly increasing, had drifted so far from the shore, as to render all idea of reaching it hopeless. It may be imagined with what feelings Madden and Harvey now hastened to an eminence, and watched their comrades drifting out to sea on a floe of ice, with a bitter breeze urging them further and further from hope of escape, and deeper among the drifting ice. During two hours they sat thus watching them, until at last they were lost to view amid the driving snow. When last seen, the two men were standing by the sledge, and Mr. Bellot on the top of a hummock.

Difficulty experienced in landing.

Mr. Bellot and his two men carried out to sea on a floe.

The two men now descended to the shore, and instantly began their return journey to the ship, walked round Griffin Bay, with very little provisions, and reached Cape Bowden, where they remained to take some rest. While there, two men were seen hastening towards them. To their great surprise and joy, they proved to be Johnson

The two men succeed in landing.

CHAP. XIII.

and Hook, who had almost miraculously escaped from their perilous position on the ice; but their sad countenances too truly told that their companion, the brave young Frenchman, was gone.

After getting a little refreshment, the whole party now returned to their ship, which they reached in safety, though not without much difficulty and severe privation. The melancholy fate of poor Bellot cannot be better told than by giving it in the words of William Johnson, who was with him on the ice at the time of his death:—"We got the provisions on shore," says he, "on Wednesday, the 17th. After we had done that, there remained on the ice David Hook, Lieutenant Bellot, and myself, having with us the sledge, Mackintosh-awning, and little boat. Commenced trying to draw the boat and sledge to the southward, but found the ice driving so fast, that we left the sledge and took the boat only; but the wind was so strong at the time that it blew the boat over and over. We then took the boat with us, under shelter of a piece of ice, and Mr. Bellot and ourselves commenced cutting an ice-house with our knives for shelter. Mr. Bellot sat for half an hour in conversation with us, talking on the danger of our position. I told him I was not afraid, and that the American Expedition was driven up and down this channel by the ice. He replied, 'I know they were; and when the Lord protects us, not a hair of our heads shall be touched.' I then asked Mr. Bellot what time it was. He said, 'About a quarter past 8 A.M.' (Thursday, the 18th), and then lashed up his books, and said he would go and see how the ice was driving. He had only been gone about four minutes, when I went round the same hummock, under which we were sheltered, to look for him, but could not see him; and, on returning to our shelter, saw his stick on the opposite side of a crack, about five fathoms wide, and the ice all breaking up. I then called out 'Mr. Bellot!' but no answer (at this time blowing very heavy). After this, I again searched round, but could see nothing of him. I believe that when he got from the shelter, the

Endeavour to drag the boat over the ice.

Mr. Bellot's death.

wind blew him into the crack, and his south-wester being tied down, he could not rise. Finding there was no hope of again seeing Lieutenant Bellot, I said to Hook, 'I'm not afraid: I know the Lord will always sustain us.' We commenced travelling, to try to get to Cape de Haven, or Port Philips; and, when we got within two miles of Cape de Haven, could not get on shore, and returned for this side, endeavouring to get to the southward, as the ice was driving to the northward. We were that night and the following day in coming across, and came into the land on the eastern shore, a long way to the northward of the place where we were driven off. We got into the land at what Lieutenant Bellot told us was Point Hogarth.

"In drifting up the Straits towards the Polar Sea, we saw an iceberg lying close to the shore, and found it on the ground. We succeeded in getting on it, and remained for six hours. I said to David Hook, 'Don't be afraid, we must make a boat of a piece of ice.' Accordingly, we got on to a piece passing, and I had a paddle belonging to the India-rubber boat. By this piece of drift-ice we managed to reach the shore, and then proceeded to where the accident happened. Reached it on Friday. Could not find our shipmates, or any provisions. Went on for Cape Bowden, and reached it on Friday night."

Tribute to Bellot.

Poor Bellot!—his was a brave, a generous, and a kindly heart. His talents and energy were deeply appreciated by the nation to which he had volunteered his services; and his affectionate, manly disposition, had endeared him to the comrades with whom he had spent so many stormy days and nights in the regions of ice and snow. The howling blast of the north, and the dark waters of the Polar Seas, are sweeping over his mortal frame; but an imperishable wreath—a tribute of gratitude and affection, twined by the hands of France and England—shall rest upon his brow for ever.

In 1852 Sir E. Belcher proceeded up Wellington Channel and reached Cape Beecher to the north-east, near which, in lat. 76° 52′ and long. 97° west, a locality was

CHAP. XIII.

found for winter quarters. Apprehensive that the open season was fast approaching to a close, preparations were made for boat and sledge explorations to the northward; and these were commenced on the 23d of August. On the 25th, when rounding a point where the coast suddenly turns to the eastward, the remains of several well-built Esquimaux houses were discovered. "They were," says Sir E. Belcher, "not simply circles of small stones, but two lines of well-laid wall in excavated ground, filled in between by about two feet of fine gravel, well paved, and, withal, presenting the appearance of great care—more, indeed, than I am willing to attribute to the rude inhabitants or migratory Esquimaux. Bones of deer, wolves, seals, &c., numerous. Coal found."

Boat and sledge explorations up Wellington Channel.

The explorations of Sir Edward and his officers led to the discovery of various lands, to the most extensive of which the name of North Cornwall was given, and of several islands washed by a sea open to the north, which Sir E. Belcher regarded as the Polar Basin. He gave the name of Victoria Archipelago to a group of islands in 78° 10′ north lat.; and the easternmost, forming the channel to Jones's Strait, which communicates with the Polar Sea, he named "North Kent." It is important to add, that as early as the 20th of May, he found the sea open in the latitude of Jones's Strait. His words are: "Polar Sea as far as the eye could range." He also states that the tides were most apparent, setting from east to west.

New discoveries.

Sir Edward Belcher left his squadron in the ice and returned with his crews to England in 1854.

His despatches furnish us with much that is interesting, both in regard to the object of his voyage, and the circumstances that induced him to leave his squadron in the ice.

Sir E. Belcher's narrative.

These despatches, as usual, contain a stirring account of the dangers, the hairbreadth escapes, that are invariably experienced by Arctic voyagers. Captain Inglefield, who was sent out in 1854 with despatches for Sir Edward Belcher, seems to have had his full share of these dangers. After safely crossing the Atlantic in his steamer, the

Voyage of the Phœnix and Talbot.

Phœnix, accompanied by the sailing vessel Talbot, he proceeded up Baffin's Bay, speaking some whalers by the way, and touching at Lievely for coal, which is abundant in these regions. Ice soon began to retard them, but they were enabled to break through it much more easily than were the navigators of former years, in consequence of the power of steam, which has greatly altered the mode of progression even in the regions of the north, not only by enabling the vessels to wend their way among loose ice in calm weather, but by giving them the power of *charging* the opposing masses under full steam, and so smashing a passage in places where, formerly, the unwieldy sailing ship would have been detained for weeks, and perhaps set fast for the winter.

"For ten days," says Inglefield, "we pushed on through heavy ice, blasting, boring, charging the nips, and making but slow advance,—the bay ice, forming strong every night, much retarding our progress; and on the 17th August we were closely beset at the edge of a large floe some miles in extent; luckily, a strong gale from the westward broke up the edges of this floe, and on the weather moderating, slacked the ice sufficiently to admit of our pushing through, and on the 19th we were fortunate enough to get into the west water."

Captain Inglefield at Wollaston Island.

After this he proceeded to Wollaston Island, where he found that a depôt of provisions had been discovered by the Esquimaux, and almost entirely broken up. "Deeming it beneficial for the service upon which I was employed, and acting under the discretionary orders with which their lordships have been pleased to supply me, I determined upon examining the depôt near Wollaston Island, deposited by the North Star in 1850. For that purpose I made the south shore of Lancaster Sound, and on the 21st, about 8.30 P.M., we passed near enough to Cape Hay to observe the coals deposited there, in 1849, by Captain Parker of the Truelove, for Lady Franklin. Observing that the staff and two casks containing letters and provisions were missing, I landed and found that no trace remained of

CHAP. XIII.

these but a portion of the head of one of them, and some broken preserved meat tins. The coals, too, had been either carried away by the Esquimaux or the ice, there being only twenty-one bags. A little after ten we rounded Cape Castlereagh, and shortly found the remains of the North Star's depôt. Anchoring in five fathoms, we lashed the Talbot alongside, and on landing I found that this spot had also been visited by the Esquimaux, and not only plundered of all that was useful to them as savages, but that degree of reckless wantonness was exhibited (in the destruction of every article that remained) so peculiar to the habits of the uncivilized tribes of man. Of the 608 casks and cases that were landed by Mr. Saunders only 114 remained, and each had been stove to examine their contents, which consisted of flour, peas, Scotch barley, oatmeal, and tobacco. Finding the flour only partially destroyed in each cask, I determined on embarking all that still remained, and the whole was shipped off to the Phœnix, with ten tons of patent fuel, and which latter I did not hesitate to embark, as Sir Edward Belcher had sent a vessel two years before to examine this depôt, and directed her commander to take the whole of the coal from the neighbouring point."

Destruction of stores by the Esquimaux.

From this point, the Phœnix and Talbot sailed to Cape Warrender, at which place they were very nearly lost. Captain Inglefield went ashore to examine a cairn that he had erected there the previous year. Returning on board, he found a strong westerly breeze with ebb-tide, which prevented much head-way being made, so they returned to seek anchorage for the night in Dundas harbour. "Unfortunately," says Inglefield, "when picking up a berth, we struck soundings in fifteen fathoms, and immediately after three, when both ships grounded on a mud bank, and the tide falling, every exertion to get the Phœnix afloat proved useless, though the Talbot was shortly warped off into deep water, where, both her bower anchors being let go, the chain of the small one was passed into the Phœnix's quarter hawse-hole, and a heavy strain brought upon it.

Narrow escape of the Phœnix and Talbot at Cape Warrender.

At three the following morning the strong breeze broke the ice away from the head of the bay, and driving out, took the Phœnix on her starboard broadside and laid her over on her beam ends, forcing her still further on shore and tearing off the whole of the false keel. The Talbot, though pushed again on the bank, escaped any damage from the ice, being sheltered by this vessel which was to windward of her. The day flood proving only a half tide, we remained immoveably fixed until the evening, by which time all the boats of both vessels had been laden with heavy stores to lighten this vessel, and I am happy to say that about 11 P.M. both ships floated off into deep water, with no other damage than I have stated."

The squadron, towards which Captain Inglefield was thus *tearing* his devious and difficult way with despatches and provisions, had been waging similar warfare with the ice in and around Wellington Channel. Immense quantities of ice had been met with, and great difficulty experienced in doing anything towards the chief object in view with the ships at all. It was therefore resolved by Sir Edward Belcher that as much as possible should be done by means of sledging parties so long as the state of the ice should permit. Indeed, from the experience that we have now gained of the possibilities of Arctic travel, it seems that the most effective operations are generally performed by means of boats and sledges. True, our ships have penetrated far and wide among the icebergs of the Polar Seas; and the Union Jack has been waved in triumph over regions where our ships seemed as though they had forsaken their native element, and were *boring* through the solid land; but at what excessive risk, at what enormous charge, and at what fearful loss of life has all this been accomplished!—while small parties in open boats, or during the winter, on foot with sledges, might have accomplished journeys as long, as arduous, and as effectual, in regard to all points of practical utility. Witness the expeditions of Franklin himself in 1821—the more recent boat voyages of Dease and Simpson—the long foot journeys undertaken by

Sir E. Belcher in Wellington Channel.

CHAP. XIII.

the men of the later ship expeditions, when they travelled over sea and land sometimes upwards of a thousand miles; and the successful journeys of Dr. Rae, of the Hudson's Bay Company, whose proceedings, in novelty, simplicity of arrangement, and daring, almost outshine the deeds of predecessors and contemporaries.

Sir E. Belcher seems to have fully appreciated such means of prosecuting the search. From July to September, the Assistance had only advanced ten miles, so that nothing could have been done by the ships in furtherance of their object.

Sledging parties sent out.

On the 2d of May 1853, the N.E. division of sledging parties left the ship, and soon reached the limits of their discoveries of the previous year. At the very outset, however, they were damped, not in their ardour, but in their bodies, by the ice proving treacherous and giving way, which gave them a cold bath at a time when a warm one would have proved much more pleasant, and caused them an irreparable loss, in the shape of 96 lbs of bread, one of the most important items in their provisions. As they advanced the prominent headlands were neared, and the islands, &c. taken possession of in due form, in the name of her Majesty, Queen Victoria.

During this journey Sir Edward pushed towards North Cornwall and Jones's Strait, but was unexpectedly stopped short beyond Cape Disraeli, about the end of the same month on which he set out, owing to the early disruption of the ice.

"The sight which I obtained from this Cape," says he, "elevated 680 feet above the sea, led me to hope for better success due east. On that course we proceeded three days on a smooth floe (making 36 miles), when we reached, on the 18th, the entrance of a splendid channel. Fog had, for some time, worried us with indistinct glimpses of the approaches, but as it now cleared off, and the sun enlivened the scene, we were regaled with such a magnificent view of successive beetling headlands on either side of the channel, and extending for about 20 miles, that it really became a

Early disruption of the ice.

puzzling matter to find names for them. Of one thing I felt quite convinced—namely, that we were now really in Jones's Channel, and that by nothing but bad taste in nature could we be deceived. The latitude, the direction, the limit in longitude to which we could see, only required an extension of 60 miles to lead to the cairn erected by Captain Austin's party. Who could dream of failure on the 18th of May? The roughness of the frozen pack now compelled us to take to the land, and we advanced easily five or six miles, when a further stop to our progress was opposed in the shape of an abrupt glazier, half a gale of wind, and the mortifying discovery that its base was washed by the sea, and the off-lying pack rotten and tumbling asunder.

Belcher's land expedition.

"Not easily daunted, it was determined to try an overland route, and avoid this unfortunate hole, as we then thought it.

"Provisions, &c., were strapped on, and we soon started to view what we had to contend with before deciding on our ultimate mode of action.

"The hills continued increasing in height as we advanced until they reached 1500 feet. We then descended and took up another position at nearly the same height as the last bluff, when we encamped for the night.

"All our hopes were crushed! Between us and the distant bluff the open sea prevailed on the 20th of May! The horizon was streaked with open 'sailing ice,' and all communication cut off for sledges. The bluff, distant 16 miles, was clearly the turning-point into Jones's Channel; no land was visible beyond it."

Stopped by the sea.

More than once their hopes were raised during the return-journey by the discovery of the remains of structures that had evidently been made by human hands, yet not, apparently, by those of the Esquimaux.

"Our progress was tantalizing, and attended with deep interest and excitement. In the first place, I discovered, on the brow of a mountain about 800 feet above the sea, what appeared to be a recent and very workman-like

Singular discovery.

CHAP. XIII.

structure of a dome (or rather a double cone, or icehouse), built of very heavy and tabular slabs, which no single person could carry. It consisted of about 40 courses, eight feet diameter, and eight feet in depth, when cleared, but only five in height from the base of the upper cone as we opened it.

Careful examination of cairn.

"Most carefully was every stone removed, every atom of moss or earth scrutinized, the stones at the bottom also taken up, but without a trace of any record, or of having been used by any human being. It was filled by drift snow, but did not in any respect bear the appearance of having been built more than a season. This was named 'Mount Discovery.'" And a short time afterwards he writes :—

"Leaving our crew, pretty well fatigued, to pitch the tent, and prepare the customary pemmican meal, I ascended the mountain above us, and discovered that we really were not far from our old position last year on Cape Hogarth, and had Cape Majendie and Hamilton Island to the west, about 20 miles.

"My surprise, however, was checked suddenly by two structures rather in European form, and apparently graves; each was similarly constructed, and, like the dome, of large selected slabs, having at each end three separate stones, laid as we should place head and foot stones. So thoroughly satisfied was I that there was no delusion, I desisted from disturbing a stone until it should be formally done by the party assembled.

"The evening following (for where the sun is so oppressive to the eyes by day we travel by night) we ascended the hill, and removed the stones. Not a trace of human beings!"

Sterility of the coasts round Wellington Channel.

Thus Sir Edward and his men travelled about during the whole season, exploring the coasts around Wellington Channel, now on foot, and then in boats, as circumstances permitted, but without discovering any clue to the fate of Sir John Franklin. There is much that invites extract and remark in his despatches, but nothing that bears par-

ticularly on the missing expedition, except the fact that the assertions which have been made, that these desolate regions were teeming with animal life at certain seasons of the year, is quite unfounded, at least, so far as his experience goes.

"By extraordinary good fortune," says he, "bears might fall in the way of the traveller; but, having killed and eaten his proportion, I much doubt if his strength would enable him to drag the remains until another piece of similar good fortune befell him. The assertion, therefore, of any 'teeming or abundance of animal life,' in this north-eastern district, is utterly untenable."

On his return from this journey, Sir Edward Belcher was informed of the safety of Captain M'Clure and his crew in the Bay of Mercy, at Baring Island.

Discovery of despatches at Princess Royal Island.

Previous to this time, despatches were found at Princess Royal Island, which had been left there by Captain Colinson in August 1851, also on the 15th April 1852, and on Ramsay Island so late as the 27th August 1852, showing that he and his crew were well, and intended to pursue the channel separating Wollaston from Prince Albert's Land. These were discovered by Lieutenant Meecham, who started from the North Star, at Beechy Island, with a sledge party, in April 1854, and returned in June.

Belcher's ships enclosed in the ice.

From this time a series of difficulties beset the vessels of Sir Edward. Great difficulty was experienced in getting the ships out of the harbours, in which they had spent the winter of 1853; and as it was desirable that Sir Edward should get to Beechy Island to superintend the despatch of the crew of the Investigator to England, every effort was made, by warping, blasting, and otherwise, to advance, but without success; and at last it became probable that they should have to spend another winter in the ice. During the spring and summer of 1854, attention was chiefly directed to rendering assistance to Captain Colinson. Depôts of provisions were placed at Melville Island, and despatches left in conspicuous places for his guidance, while arrangements were contemplated for carrying on the

CHAP. XIII.

search for Sir John Franklin along the western shores of Baffin's Bay—all other places, in which it was at all likely the ill-fated expedition could have been lost, having been thoroughly examined. The ice, however, prevented these plans being carried out, and, towards autumn, it became evident to Sir E. Belcher that every effort should be directed to extricating the ships from their icy positions, and bringing them back to England. This opinion, however, did not appear to be shared by the officers under his command. Sir Edward's opinion, that they should not risk another winter in the ice was founded on the fact that his provisions were scarcely sufficient for another year, that he was very short of preserved meats, and that the men were generally a good deal debilitated by severe labour, and a long sojourn in the Arctic Seas. In these circumstances, Sir Edward gave orders that the whole squadron should be abandoned. The ships were accordingly put in order, the hatches closed down, everything that was possible done for their preservation, and, about the end of August 1854, the united crews of the five vessels embarked in the North Star, and returned to England.

Their abandonment.

Such is a brief summary of the proceedings of the expedition of Sir E. Belcher. After its return, a court-martial was held upon the officers, all of whom, with the exception of Sir Edward Belcher, were honourably acquitted, as a matter of course, in consequence of their having acted under orders; and their swords were returned to them, with very flattering expressions of approbation. Sir Edward, although also acquitted, was reproved for not having consulted sufficiently with his colleagues, and had his sword returned to him in significant silence.

Court-martial on the officers of the Expedition.

Their acquittal.

In a work of this nature, it would be out of place to enter into the details or merits of a question upon which very few indeed are competent to form a judgment. In justice to Sir Edward Belcher, however, it is right to state that he made a long and able defence; which, however it may have failed to carry conviction to the Lords of the Admiralty, at least convinces the mind of the unenlightened

reader that he acted conscientiously for the best—that he did not infringe the letter of his instructions, and that it would be a puzzling thing to point out how he could have acted better. On the other hand, Captain Kellet and others, men whose opinions are not to be lightly esteemed, have broadly stated that they would not have abandoned their ships unless they had been ordered to do so by their superior officer; and that they believed there was quite a sufficiency of provisions to have enabled them to spend another winter in the ice, and so afford succour to Captain Colinson and his men.

Conflicting opinions of Belcher and Kellet.

While these things were going on in England, another note of information sounded from the Frozen Seas; but its tone was very sad. In October, Dr. Rae arrived from Repulse Bay, with the news that part of Sir John Franklin's expedition had been seen alive by Esquimaux in 1850, and that their remains had been discovered by another party of Esquimaux in 1851. In corroboration of the above, Dr. Rae brought with him a variety of articles, chiefly silver spoons and forks, with the names of several of Franklin's party marked thereon, and one small piece of silver-plate bearing the name of the ill-fated commander —all of which were procured by Dr. Rae from Esquimaux, who stated that they had obtained them from another band who had found the mutilated bodies of about forty of the party. The tale of their death is very sad, and all the more so that it took place so recently, and in the very neighbourhood of the brave men who have perilled life and limb to help them. The following extract from Dr. Rae's journal gives a graphic and harrowing account of the end of part, at least, of this devoted band.

Dr. Rae's discoveries.

Dr. Rae was following up his discoveries in the neighbourhood of Boothia. "On the morning of the 20th," says he, "we were met by a very intelligent Esquimaux, driving a dog-sledge laden with musk-ox beef. This man at once consented to accompany us two days' journey, and in a few minutes had deposited his load on the snow, and was ready to join us. Having explained to him my object, he said

Meeting with an Esquimaux in the neighbourhood of Boothia.

CHAP. XIII.

that the road by which he had come was the best for us, and, having lightened the men's sledges, we travelled with more facility. We were now joined by another of the natives who had been absent seal-hunting yesterday, but, being anxious to see us, had visited our snow-house early this morning, and then followed up our track. This man was very communicative, and on putting to him the usual questions as to his having seen 'white man' before, or any ships or boats, he replied in the negative; but said that a party of 'Kabloomans' had died of starvation a long distance to the west of where we then were, and beyond a large river. He stated that he did not know the exact place, that he never had been there, and that he could not accompany us so far. The substance of the information then and subsequently obtained from various sources was to the following effect:—

"In the spring, four winters past (1850) while some Esquimaux families were killing seals near the north shore of a large island, named in Arrowsmith's charts King William's Land, about forty white men were seen travelling in company southward over the ice, and dragging a boat and sledges with them. They were passing along the west shore of the above-named island. None of the party could speak the Esquimaux language so well as to be understood, but by signs the natives were led to believe that the ship or ships had been crushed by ice, and that they were now going to where they expected to find deer to shoot. From the appearance of the men—all of whom, with the exception of an officer, were hauling on the drag-ropes of the sledge, and looked thin—they were then supposed to be getting short of provisions, and they purchased a small seal, or piece of seal, from the natives. The officer was described as being a tall, stout, middle-aged man. When their day's journey terminated, they pitched tents to rest in.

His intelligence.

"At a later date the same season, but previous to the disruption of the ice, the corpses of some thirty persons and some graves were discovered on the continent, and

five dead bodies on an island near it, about a long day's journey to the north-west of the mouth of a large stream, which can be no other than Back's Great Fish River (named by the Esquimaux Oot-koo-hi-ca-lik), as its description and that of the low shore in the neighbourhood of Point Ogle and Montreal Island agree exactly with that of Sir George Back. Some of the bodies were in a tent or tents; others were under the boat, which had been turned over to form a shelter, and some lay scattered about in different directions. Of those seen on the island it was supposed that one was that of an officer (chief), as he had a telescope strapped over his shoulders, and a double-barrelled gun lay underneath him.

Probable discovery of the missing Expedition.

"From the mutilated state of many of the bodies, and the contents of the kettles, it is evident that our wretched countrymen had been driven to the dread alternative of cannibalism as a means of sustaining life. A few of the unfortunate men must have survived until the arrival of the wild-fowl (say until the end of May), as shots were heard, and fresh bones and feathers of geese were noticed near the scene of the sad event.

Condition of the remains.

"There appears to have been an abundant store of ammunition, as the gunpowder was emptied by the natives in a heap on the ground out of the kegs or cases containing it, and a quantity of shot and ball was found below high-water mark, having probably been left on the ice close to the beach before the spring commenced. There must have been a number of telescopes, guns (several of them double-barrelled), watches, compasses, &c., all of which seem to have been broken up, as I saw pieces of these different articles with the natives, and I purchased as many as possible, together with some silver spoons and forks, an Order of Merit in the form of a star, and a small silver plate engraved 'Sir John Franklin, K.C.B.'"

Relics of Franklin Expedition.

Dr. Rae concludes by saying that he is of opinion that no violence had been offered to the sufferers by the natives, but believes that they were starved to death. The following is a list of the articles obtained from the Esquimaux:—

CHAP. XIII.

List of articles recovered by Dr. Rae.

1 silver table-fork—crest, an animal's head with wings extended above; 3 silver table-forks—crest, a bird with wings extended; 1 silver table-spoon—crest, with initials "F. R. M. C." (Captain Crozier, Terror); 1 silver table-spoon and 1 fork—crest, bird with laurel branch in mouth, motto, "*Spero meliora;*" 1 silver table-spoon, 1 tea-spoon, and 1 dessert-fork—crest, a fish's head looking upwards, with laurel branches on each side; 1 silver table-fork—initials, "H. D. S. G." (Harry D. S. Goodsir, assistant-surgeon, Erebus); 1 silver table-fork—initials, "A. M'D." (Alexander M'Donald, assistant-surgeon, Terror); 1 silver table-fork—initials, "G. A. M." (Gillies A. Macbean, second master, Terror); 1 silver table-fork—initials, "J. T.;" 1 silver dessert-spoon—initials, "J. S. P." (John S. Peddie, surgeon, Erebus); 1 round silver plate, engraved, "Sir John Franklin, K.C.B.; a star or order, with motto, "*Nec aspera terrent,* G. R. III. MDCCCXV."

Rae returns to England.

On obtaining the above information, Dr. Rae instantly hastened to England for the purpose of preventing any further expeditions being despatched in search of the lost navigators. His report, as might have been expected, was subjected on all hands to criticism and comment. Many were of opinion that the information obtained did not warrant the conclusion that the whole party was lost. Among others, Dr. Scoresby was inclined to this opinion.

The discoveries made by Dr. Rae on this journey set at rest the question as to a passage westward existing at the head of Pelly Bay. After quitting that bay he crossed the land in a westerly direction, and travelled to Castor and Pollux River—Dease and Simpson's extreme—when he searched a pillar erected there but found no records. It must ever be regretted that while here, within so short a distance of the spot where the crews of Franklin's ships were reported to have perished, Dr. Rae did not continue his journey westward in search of relics and records. He seems to have felt it his duty not to turn aside from the main object of his journey—the exploration of the Boothian Peninsula; so, after searching the pillar referred to, he

crossed Inglis and Shepherd's Bays to Cape Colville, where the coast turns abruptly to the north. He followed it to Point de la Guiche and Balfour Bay, which latter was his extreme northern limit. Bad weather rendering it impossible for him to complete the survey between the Magnetic Pole and Bellot Strait, he returned to Repulse Bay and arrived at York Factory on the 31st August 1854.

CHAPTER XIV.

Voyages of Captain Collinson and Dr. Kane; and overland journeys of Dr. Rae, and Messrs. Anderson and Stewart.

Captain Collinson's Voyage in the Enterprise—His Discoveries and Return to England—The Second American Expedition under Dr. Kane—Their Adventures, Discoveries, and Sufferings during two Winters in the Ice—Abandonment of their Ship—Their Arduous Boat and Sledge Journey, and Final Deliverance and Return to America—Overland Search by way of the Great Fish River by Anderson and Stewart.

CHAP. XIV.

THE history of Polar Seas and Regions has, during the last ten or eleven years, resolved itself into a history of the search for Sir John Franklin.

Remarks on former Expeditions.

Year by year expeditions by land and sea have gone forth, and returned to tell the same sad tale,—that the lost vessels had neither been heard of nor seen. At last, as we have seen, in 1850 and 1854 the position of their first winter's quarters, and evidence of their having been wrecked, reached us.

Since that year several expeditions have returned, each having filled up a portion of our charts of the Polar Seas, or procured some additional information in regard to the unfortunate Erebus and Terror.

It will be remembered that Collinson and M'Clure set out together in the Enterprise and Investigator at the beginning of 1850, for the purpose of proceeding to Behring's Straits, and sailing thence eastward to meet the Franklin Expedition. On the 10th of July 1851, Captain Collinson left Port Clarence in Behring's Straits, and entered the ice, which surrounded and carried him (fortu-

nately) in the direction in which he wished to go. Point Barrow was doubled on the 26th. Proceeding along the northern coast of America with some difficulty, owing to the ice, he passed the mouth of the Mackenzie River on the 8th of August. The effect of this river was to widen the channel between the pack and the land to 50 miles, at which distance from the shore no bottom was obtained at 150 fathoms. On the 20th they sighted the Pelly Islands, and discovered two islets to the north-east of them. On the 26th Cape Parry was in sight, and Cape Erebus was discovered to the northward. "Hauling up close to the land," writes Collinson, "we entered a strait on the 28th, in which, on the following day, two islets were seen; on landing I found a whale-boat and depôt of provisions, with a notice of Commander M'Clure's, dated June 15, 1851. Continuing our course we reached the north end at midnight, on the 30th, when another beacon was seen on the north shore, where similar information to that deposited on the Princess Royal Isles was found. Here in lat. 73° 30′ N., and long. 114° 35′ W., our progress was barred by large fields of ice, leaving no coast water in which a ship could navigate, either to the eastward or westward."

Progress during first summer.

Finding it impossible to advance, Captain Collinson looked out for winter quarters in Prince of Wales Strait; but, failing to find a suitable spot, he proceeded to the western coast of Baring Island, where, on Point Kellet, he found another record of M'Clure's ship, dated August 18, 1851. On the 7th September he reached a small islet in lat. 70° 54′, long. 125° 12′, where his advance was checked for that season. Returning to the southward he finally found winter quarters in a spot on Prince Albert's Land, near to the entrance of Prince of Wales Strait. To the south of their position a sound, 60 miles deep (Minto Inlet), was discovered. They were frozen in on 21st October 1851, and early in April 1852 depôts for travelling parties were laid out.

Winter quarters in 1851–2.

The Southern Expedition, under Lieutenant Jago, ex-

CHAP. XIV.

Sledge expedition under Lieutenant Jago.

plored the coast towards Wollaston Land. It was found to maintain a southerly direction to lat. 70° 38′, when it assumed an easterly trend. The persevering and daring efforts of Captain Collinson were doomed to comparative disappointment, inasmuch as, while all the danger and trouble of discovery were undergone, the honours were found to have been snatched away beforehand by Captain M'Clure, whose cylinders and records were everywhere met with. Lieutenant Jago, on this expedition, reached lat. 70° 32′, long. 115° 25′; here a party of Esquimaux were met with, who, however, showed no sign of having met with the missing vessels. A sound here lay before them. It appeared to be 20 miles wide, and so deep that its easterly termination was not seen. At this point Lieutenant Jago returned back and reached the ship after 49 days' absence.

Two sledge parties sent to the northward.

To the northward two expeditions were sent out on the 16th of the same month,—one under Captain Collinson, the other under Lieutenant Parkes. They proceeded through the Prince of Wales Strait together and then diverged—Collinson to the eastward, along the north coast of Prince Albert's Land towards Cape Walker; Parkes to the northward, across the ice towards Melville Island, which he was to reach if possible. Had he done so, he would have thus accomplished the connecting link of that channel of the north-west passage—an honour which, as we have already seen, was reserved for M'Clure. Parkes found the ice impassable, and returned to the ship on the 21st of May. The captain reached lat. 72° 45′, and long. 113° 40′, where he found a deep bay—now named Collinson's Inlet—and returned to the ship on 6th June. The season of 1852 remained closed till the first week in September, when they succeeded in sailing into the inlet examined by Lieutenant Jago, which they hoped would lead them "into the centre of the Archipelago." It proved to be a gulf, however, and is now named Prince Albert's Sound. By this discovery Captain Collinson proved that Wollaston, Victoria, and Prince Albert's Lands are joined.

The captain now made the bold determination of pushing south-eastward, through Dolphin and Union Straits, and wintering at the south-eastern extreme of Victoria Land. The attempt was hazardous, owing to the uncertain depth of these narrow channels, the increasing darkness, and the absolute uselessness of the compasses, owing to the vicinity of the magnetic pole. They reached Cambridge Bay on the 26th of September, and met with a party of Esquimaux, among whom were found some implements of brass and iron which were supposed to have belonged to Franklin's Expedition, but no information could be obtained regarding them.

East coast of Victoria Land explored.

Another winter passed, and, early in April 1853, depôts were sent out to facilitate the exploration of the east coast of Victoria Land. On the 12th of that month the sledge party set forth, following the coast, which trended to the southward of east as far as the 102d meridian, where it turned to the north. Proceeding onward they reached an islet (Gateshead Island) in lat. 70° 26′ N., and long. 100° 45′ W., beyond which no land was seen. Returning to the main of Victoria Land they found that it trended *westward* as far as lat. 70° 12′ N. and long. 102° W. This was their furthest point. But here, again, they found that the honours of discovery had been gathered beforehand by Dr. Rae, who, in 1851, had reached nearly the same point and left a record in a cairn which they discovered. Little did either Rae or Collinson know, at that time, that they had actually reached the neighbourhood of the fatal spot where Franklin's ships had been wrecked. The recent return of Captain M'Clintock in the Fox now shows that the spot where Franklin perished is only a few hours' journey from the south-eastern corner of Victoria Land.

Traces of Rae's visit discovered.

Dr. Rae in 1851.

In 1851 Dr. Rae had descended the Coppermine River, and crossing Dolphin and Union Straits to Wollaston Land, he explored that coast eastward to 110° W., and westward to 117° 17′ W., but without discovering any trace of the lost expedition.

CHAP. XIV.

Relics found.

Captain Collinson was more successful. Besides the brass and iron implements above referred to, a fragment of a companion-hatchway, or door-frame, was found on an island of the Finlayson group. This was afterwards conveyed to England, proved to have been supplied by Government, and supposed, therefore, to have belonged either to the Erebus or Terror.

Failing to discover further traces of Franklin, Captain Collinson now deemed it right to make good his retreat from the Polar Regions. In August the Enterprise once more put to sea and turned her prow westward for Behring's Straits; but she was destined to spend another winter in the ice. The winter of 1853–54 was passed in Camden Bay. Here they were visited by a party of Esquimaux who had in their possession a notice, printed on board the Plover in 4th July 1853, by which they learned that at that date the Investigator had not been seen, concluding that Captain M'Clure must therefore be shut up on the west face of Baring Land; Collinson determined to open communication with Commander Maguire, to obtain provisions that he might return to M'Clure's relief. On reaching Port Clarence, however, the news of M'Clure's safety rendered this unnecessary, and, on the 16th September 1854, the Enterprise sailed, *via* Hong Kong, for England.

Winter of 1853–4.

Collinson's return to England.

We now turn to the most stirring and romantic of all the expeditions that have been sent out in search of Sir John Franklin's ships,—namely, the second American Expedition fitted out by Mr. Grinnell, of America, and placed under the command of Elisha Kent Kane, of the U.S. navy. This heroic young officer, whose end was undoubtedly hastened by the sufferings which he endured on this expedition, has left behind him a record of energy, perseverance, endurance, and courage, under the most trying circumstances, than which nothing more remarkable has appeared in the annals of Arctic story. The quiet, deep-seated enthusiasm of the leader, and the manly, straightforward, irresistible energy of his little band of

Second Grinnel expedition under Dr. Kane.

CHAP. XIV

Relics found

Winter of 1853-4.

PERILOUS POSITION OF THE ADVANCE.

We had barely time to cast off before the face of the berg fell in ruins, crashing like near artillery.—Page 523.

heroes, has not, we think, been equalled—certainly has not been excelled—by any former navigators in those inhospitable regions. We therefore feel that no apology need be offered for giving the second Grinnell Expedition prominence, and dwelling upon it at considerable length.

Preliminary arrangements, &c.

In the month of December 1852, Dr. Kane received special orders from the Secretary of the United States Navy, "to conduct an expedition to the Arctic Seas in search of Sir John Franklin." The preliminary arrangements are thus given in the doctor's fascinating book:—

"I had been engaged under Lieutenant De Haven, in the Grinnell Expedition, which sailed from the United States in 1850 on the same errand; and I had occupied myself for some months after our return in maturing the scheme of a renewed effort to rescue the missing party, or at least, to resolve the mystery of its fate.

Mr. Grinnel's liberality.

"Mr. Grinnell, with a liberality altogether characteristic, had placed the Advance, in which I sailed before, at my disposal for the cruise; and Mr. Peabody, of London, the generous representative of many American sympathies, had proffered his aid largely toward her outfit. The Geographical Society of New York, the Smithsonian Institution, the American Philosophical Society,—I name them here in the order in which they announced their contributions,—and a number of scientific associations and friends of science besides, had come forward to help me; and by their aid I managed to secure a better outfit for purposes of observation, than would otherwise have been possible to a party so limited in numbers, and absorbed in other objects."

The crew and the ship "Advance."

The band of brave and picked men, who set out in search of our lost countrymen, numbered eighteen souls including the commander. The Advance, in which they sailed, was a hermaphrodite brig of 144 tons, a good sailer, strengthened for her peculiar work, and fitted out with every requisite—but few luxuries—for a prolonged search through the Arctic Seas. They had five boats, one of which was a metallic life-boat. The equipment "consisted of little

CHAP. XIV.

else than a quantity of rough boards, to serve for housing over the vessel in winter, some tents of India-rubber and canvas, of the simplest description, and several carefully built sledges." Besides the ordinary stores and necessaries for an Arctic voyage, they were supplied with a large and well-chosen library, and a valuable set of instruments for scientific observation.

Energy of the Americans.

There was a vigour, a Spartan-like simplicity, a thoroughgoing straightforwardness, in the arrangements and operations of this little expedition, that entitle it to a prominent place in Arctic history. The chief men were at once practical and scientific, and the reliance that was placed in them may be gathered from the following quotation:—"We did not sail under the rules that govern our national ships; but we had our own regulations, well considered and announced beforehand, and rigidly adhered to afterward through all the vicissitudes of the expedition. These included—first, absolute subordination to the officer in command, or his delegate; second, abstinence from all intoxicating liquors, except when dispensed by special order; third, the habitual disuse of profane language. We had no other laws."

Plan of search.

The plan of search included sledge travelling on *terra firma*, and "was based upon the probable extension of the land masses of Greenland to the Far North,—a fact at that time not verified by travel, but sustained by the analogies of physical geography." Their intention at starting was, to pass up Baffin's Bay to its most northern attainable point; and thence, pressing on towards the Pole, as far as boats and sledges could carry them, examine the coast-line for vestiges of the lost party.

Expedition sets sail.

On the 30th of May 1853, this, the second Grinnell Expedition left New York, and about the end of July they were battling with the ice at the head of Baffin's Bay, on the threshold of the scene of their future trials and triumphs. At the very outset they had an indication of the coming struggle. Fearing that they should be beset in the ice during a fresh breeze while heading towards

Cape York, they endeavoured to make fast to a large iceberg. "After eight hours," writes Kane, "of very heavy labour, warping, heaving, and planting ice anchors, we succeeded in effecting it.

Narrow Escape.

"We had hardly a breathing spell, before we were startled by a set of loud crackling sounds above us; and small fragments of ice, not larger than a walnut, began to dot the water like the first drops of a summer shower. The indications were too plain: we had barely time to cast off before the face of the berg fell in ruins, crashing like near artillery."

Having escaped this danger, they continued all that night to do battle with the floes in rough weather, losing sixty fathoms of whale line, driving into a couple of bergs, carrying away their jibboom and shrouds, and destroying one of their quarter-boats. Rugged work this—an earnest of what was yet in store!

Advance enters Smith's Sound.

Passing onwards into Smith's Sound at the head of Baffin's Bay, the Advance sailed into the unknown seas beyond, and the double work of exploration and discovery began. Meanwhile, during the voyage to the scene of their labours, the crew had been employed in constructing sledges, sewing up blanket bags, and otherwise making preparation for the winter campaign. The coast here is described as particularly uninviting. "As we look far off to the west," says Dr. Kane, on the 6th of August, "the snow comes down with heavy uniformity to the water's edge, and the patches of land seen as rare as the summer's snow on the hills about Sukkertoppen and Fiskernaes.* On the right, we have an array of cliffs whose frowning grandeur might dignify the entrance to the proudest of Southern Seas. I should say they would average from 400 to 500 yards in height, with some of their precipices 800 feet at a single steep. They have been until now the Arctic pillars of Hercules; and they look down on us as if they challenged our right to pass. Even the

* One of the Greenland Colonies.

CHAP. XIV.

sailors are impressed as we move under their dark shadow."

Depôt laid down.

On reaching Littleton Island, they landed for the purpose of forming a depôt of provisions, and burying one of the boats to fall back upon in case of disaster. This accomplished, they passed onward into the unknown North.

Esquimaux hunter and dogs procured.

While passing the Danish settlements on the Greenland coast, Dr. Kane had secured the services of an Esquimaux youth, named Hans, whose powers as a hunter, and a man of endurance, were notorious. He also procured a number of Esquimaux dogs, which he intended to make much use of as sledge haulers in his winter journeys. Writing of these fine animals, he says:—

Dogs.

"It may be noted among our little miseries that we have more than fifty dogs on board, the majority of which might rather be characterized as 'ravening wolves.' To feed this family, upon whose strength our progress and success depend, is really a difficult matter. The absence of shore or land ice to the south in Baffin's Bay has prevented our rifles from contributing any material aid to our commissariat. Our two bears lasted the cormorants but eight days; and to feed them upon the meagre allowance of two pounds of raw flesh every other day is an almost impossible necessity. Only yesterday they were ready to eat the caboose up, for I would not give them pemmican. Corn, meal, or beans, which Penny's dogs fed on, they disdain to touch; and salt junk would kill them."

Walrus shooting.

In order to provide for these dogs Dr. Kane and a party set out with their rifles to shoot walrus, of which elephantine creatures there were many in the sea around them; but, although they aimed well, the hides of the walrus were so thick that their "rifle-balls reverberated from their sides like cork-pellets from a pop-gun target," and they failed to get within harpoon range. However, they were somewhat consoled by the discovery of a dead narwhal or sea-unicorn, which secured for them, as the doctor writes, "at least 600 pounds of good, fetid, wholesome flesh!" The

horn of this creature was four feet long, and his blubber yielded two barrels of oil. But this supply did not last them long, as we find from the following passage, which occurs a few days later.

The dogs again!

"More bother with these wretched dogs! worse than a street of Constantinople emptied upon our decks; the unruly, thieving, wild-beast pack! Not a bear's paw, or an Esquimaux cranium, or basket of mosses, or any specimen whatever, can leave your hands for a moment without their making a rush at it, and, after a yelping scramble, swallowing it at a gulp. I have seen them attempt a whole feather-bed; and here, this very morning, one of my Karsuk brutes has eaten up two entire bird's-nests which I had just before gathered from the rocks,—feathers, filth, pebbles, and moss—a peckful at least. . . . . When we reach a floe, or berg, or temporary harbour, they start out in a body, neither voice nor lash restraining them, and scamper off like a drove of hogs in an Illinois oak-opening. Two of our largest left themselves behind at Fog Inlet, and we had to send off a boat party to-day to their rescue. It cost a pull through ice and water of about eight miles before they found the recreants, fat and saucy, beside the carcass of the dead narwhal."

Dangerous navigation.

Proceeding onwards through Smith's Sound they advanced sometimes rapidly, sometimes slowly, according to wind and the state of the ice; but generally their progress was made in the face of great difficulties. Frequently, too, they were almost wrecked in those terrible gales which sometimes occur in the Arctic Regions, rendering the universal sterility, if possible, more awful and savage. On the 19th of August there were indications of the approach of one of those storms.

The sky looked sinister, and a sort of scowl overhung the blink under the great brow of the clouds to the southward. The dovekies deserted the channel as if they distrusted the weather, and grim walrus approached to within twenty feet of the brig, mowing up the sea-ripples with their tusks. The close approach to land of these sphinx-

CHAP. XIV.

faced monsters is said to portend a storm, and on this occasion the saying was fully verified. On the following day it blew a perfect hurricane. They had seen it coming, and were ready with three good hawsers out ahead, fixed to a ledge of rocks, named God-send ledge, and everything snug on board the little brig.

Terrible gale.

But the gale proved fiercer than had been anticipated. On it came heavier and heavier. Dr. Kane had just turned in to warm and dry himself after protracted watching and exposure, when he heard the sharp twanging snap of a cord. Their six-inch hawser had parted, and they were swinging by the two others—the gale roaring like a lion to the southward. Half a minute more and "twang, twang!" went a second report, which, by the shrillness of the ring, was known instantly to be the whale-line. They were now left swinging by only one hawser, but that one was good and strong, a "noble ten-inch manilla." On hearing the snap of the whale-line Dr. Kane sprang up and was in the act of hurrying on his socks and seal-skin boots when M'Gary, one of the crew, went down the companion-ladder, exclaiming that he thought the hawser could not hold on much longer. On reaching the deck the captain found the cable proving its excellence, and the crew as they gathered round him were loud in its praises.

Parting of the hawsers.

"We could hear," writes Dr. Kane, "its deep Eolian chant, swelling through all the rattle of the running-gear and moaning of the shrouds. It was the death-song! The strands gave way with the noise of a shotted gun; and in the smoke that followed their recoil we were dragged out by the wild ice at its mercy."

Instantly they were hurried away into the rushing drift, and it seemed as if nothing could be looked for but swift destruction. But their course was not yet run. There was work for them still to do, and the hand of the Almighty preserved them in this terrible crisis. Ahead of them, in the direction in which they were being driven, heavy ice-tables were grinding up and clogging the passage. Out of this they must keep at all hazards. There was but one

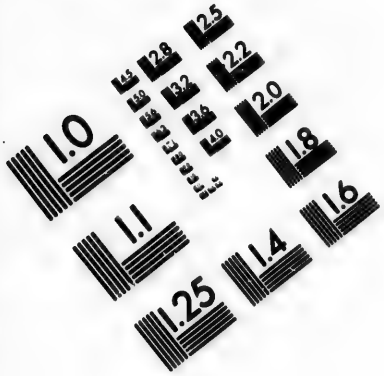
course left,—to drop the anchors ere they closed with the piling masses. The heaviest anchor was let go with the desperate hope of winding the brig; but there was no withstanding the ice-torrent that followed them. They had only time to fasten a spar as a buoy to the chain and let her slip. So went the best bower!

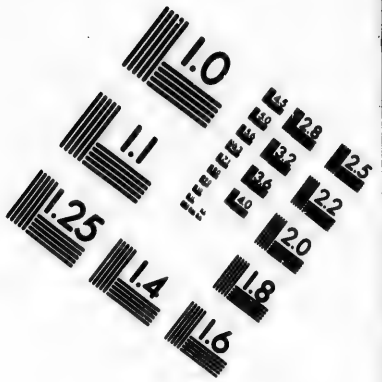
Brig swept away by the gale.

They now drifted with the gale, scraping helplessly on a lee of ice seldom less than thirty feet thick. One upturned mass rose above the gunwale, smashed in the bulwarks, and deposited half a ton of ice in a lump on the deck. Untravelled readers can form but a faint conception of the terrible situation in which they were placed; driving along in the midst of warring masses of ice, any two of which could have crushed the brig like a nut-shell had she been caught between them; the water of the sea so cold that had they been suddenly left to struggle in it by the sinking of their vessel, they would have been cramped and rendered powerless in a few seconds; the dreary desolation of the wild scene, the howling storm, and all this coupled with the fact, that even in the event of escaping the waves they would have been left to perish miserably on an uninhabited and utterly barren shore.

New dangers ahead.

Soon a new enemy came in sight ahead. Just beyond the line of the ice-floes against which they were alternately sliding and thumping was a group of bergs. They had no power to avoid them, and their hopes were almost giving way as they rushed towards them, when a narrow passage was observed between the bergs and the floe-edge. In a moment they were in the midst of them, and then, to their alarm, they found that the bergs were not at rest, but bearing down on each other, and threatening to crush the brig between them; at the same time the wind failed, from some inexplicable cause. Just then a low sconce-piece, or water-washed berg, came driving up from the southwards. Dr. Kane, one main feature of whose character was prompt action in the moment of danger, ordered an anchor to be cast upon the little berg as it sped past. It was done, and this noble tow-horse dragged them on with the spray dash-





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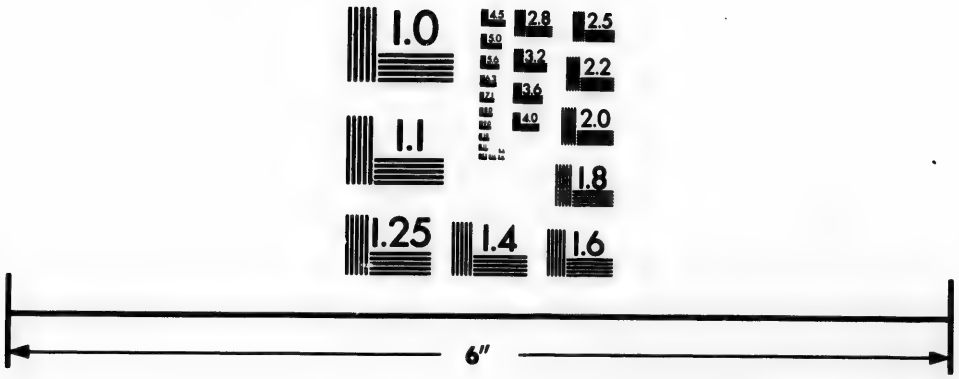

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CHAP. XIV.

Escape from imminent danger.

ing over his windward flanks and his forehead ploughing up the lesser ice as if in scorn. The bergs encroached as they advanced. The channel narrowed to a width of about forty feet, compelling them to brace the yards to clear the impending ice-walls, and they passed in safety; but it was a close shave,—so close that the port-quarter boat would have been crushed had they not taken it in from the davits. Next moment they were under the lee of a berg in a comparatively open lead. "Never," concludes Dr. Kane, "never did heart-tried men acknowledge with more gratitude their merciful deliverance from a wretched death."

This is but one of the numerous storms and dangers to which the American Expedition was exposed on its adventurous voyage to the far north. There are many such stirring incidents recorded in Dr. Kane's most interesting volume, but limited space compels us unwillingly to pass the most of them over in silence. The conduct of the crew on these nerve-trying occasions was beyond all praise. In speaking of this the doctor says:—

Gallant conduct of crews in midst of danger.

"During the whole of the scenes I have been trying to describe, I could not help being struck by the composed and manly demeanour of my comrades. The turmoil of ice under a heavy sea often conveys the impression of danger where the reality is absent; but, in this fearful passage, the parting of our hawsers, the loss of our anchors, the abrupt crushing of our stoven bulwarks, and the actual deposit of ice upon our decks, would have tried the nerves of the most experienced ice-men. All—officers and men—worked alike. Upon each occasion of collision with the ice which formed our lee-coast, efforts were made to carry out lines; and some narrow escapes were incurred, by the zeal of parties leading them into positions of danger. Mr. Bonsall avoided being crushed by leaping to a floating fragment; and no less than four of our men at one time were carried down by the drift, and could only be recovered by a relief party after the gale had subsided."

After this the brig got into shallows and frequently grounded, but fortunately sustained little damage beyond

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THE FAITH.

One of the boats in which Dr. Kane and his party escaped [illegible]

Messrs. Childs and Peterson, Philadelphia.

CHAP. XIV.

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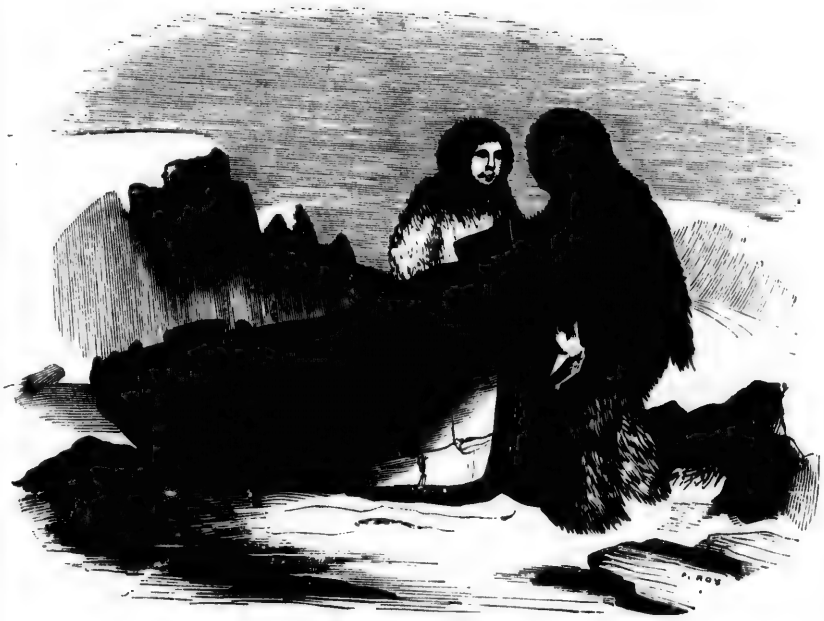


THE FORLORN HOPE.

Page 529.

THE FAITH.

One of the boats in which Dr. Kane and his party escaped;—now at the store of Messrs. Childs and Peterson, Philadelphia.

Aground—difficulties of navigation.

the losing of her false keel. On one occasion, however, they had a narrow escape from fire. While a party were on the ice-belt "tracking" the brig along by means of ropes, she took the ground at high water. As there was no hope of getting her off before the next tide, Dr. Kane ordered heavy tackle to be fastened to the rocks which lined the base of the cliffs, and trusted to the strength of the noble little craft enabling her to withstand the strain to which she was subjected. The succeeding high tide rose and retired, but she still remained fast, and fears were entertained as to her being got off at all. Everything that could be got out on the rocks was landed, all the boats were filled with heavy stores alongside, the rudder was sunk astern, the heavy anchor was lowered into one of the quarter boats, and heavy hawsers were fastened to a grounded lump of ice, ready for instant bearing. While they were in this position, the brig suddenly heeled over during the night, tumbled the men out of their berths, and upset the cabin stove, which was filled with glowing anthracite. The deck blazed smartly for a time, but the fire was happily smothered, at the cost of a pilot-cloth coat which was sacrificed for the public good, and several buckets of water finally extinguished it.

The "forlorn hope."

Finding it impossible to advance further at this time with the brig, a boat expedition was planned and carried into effect, under the title of the "forlorn hope." Into the details of this interesting journey we cannot enter. It was rough and toilsome. The boat was soon abandoned, and the advance continued on a sledge. Their usual night halts were upon knolls of snow under the rocks, on one of which they were caught by the rising tide, and not being able to effect a retreat in time, had to stand in the water holding their sleeping gear in their arms, until the tide fell. The skeletons of Musk oxen were found in various places along the coast, which was rocky and wild in the extreme. Protruding tongues of glaciers and wide chasms in the ice-belt were crossed with much difficulty; and when, at last, they arrived at places over which the sledge could

CHAP. XIV.

not be taken, the provisions and scientific instruments were strapped on the shoulders of the stoutest men, and the journey was continued on foot. On their fifth day out they found that they had advanced forty miles to the northward, and soon after, they came upon a large bay of open water, into which a noble river emptied itself. This river—the largest yet known in North Greenland—was about three quarters of a mile wide at its mouth. It was named the Mary Minturn River, after the sister of Mrs. Henry Grinnell. Here they encamped, and listened with delight to the unusual sound of running waters; and "here," writes Dr. Kane, "protected from the frost by the infiltration of the melted snows, and fostered by the reverberation of solar heat from the rocks, we met a flower growth, which, though drearily Arctic in its type, was rich in variety and colouring. Amid festuca and other tufted grasses, twinkled the purple lychius and the white star of the chickweed; and, not without its pleasing associations, I recognised a solitary hesperis, the Arctic representative of the wallflowers of home." Numerous tracks of deer were found in the moss-beds near this river, which is situated near 78° 52′ north latitude, and 78° 41′ west longitude.

Mary Minturn River.

Sixteen miles beyond this they reached a bold headland which was named Cape Thackery. Eight miles further on another headland was gained, and named Cape Francis Hawkes. This was their turning point at that time. From his observation of the coast and state of the ice, Dr. Kane came to the conclusion that a further advance in the brig that season was impossible, so he made up his mind to lay her up in the bay in which she had been left, and to continue the search by means of sledges during the winter.

Capes Thackeray and Francis Hawkes.

On returning, the order was at once given to warp into the bay, which was named Rensselaer Harbour, and the brig was securely moored in seven fathoms water, within the shelter of the surrounding rocks. It was destined to be a long resting-place for the good little craft that had

Return to Rensselaer Harbour.

battled so long and bravely with the ice, "for the same ice is around her still." CHAP. XIV.

Preparations were now made for spending the winter in these remote and dreary regions. By the 10th of September the thermometer had fallen to 14°, and the young ice had cemented the floes, so that they could walk and sledge round the brig. The long dark night, too, began to set in, and before the middle of October the sun took final leave of them, and the only indication of day was a faint gleam of light on the horizen. Even this faded away at last, and the whole ice-bound region would have been shrouded in total darkness, but for the Aurora Borealis, and the stars which shone as bright at noon-day as at night. Their winter was sunless for one hundred and forty days. Preparations for wintering.

The effect of this long continued darkness was depressing in the extreme, especially on the poor dogs, many of which died during the winter. Referring to this, Dr. Kane writes:—"This morning at five o'clock—for I am so afflicted with the insomnium of this eternal night, that I rise at any time between midnight and noon—I went upon deck. It was absolutely dark; the cold not permitting a swinging lamp. There was not a glimmer came to me through the ice-crusted window-panes of the cabin. While I was feeling my way, half puzzled as to the best method of steering clear of whatever might be before me, two of my Newfoundland dogs put their cold noses against my hand, and instantly commenced the most exuberant antics of satisfaction. It then occurred to me how very dreary and forlorn must these poor animals be, at atmospheres 10° in-doors and 50° without; living in darkness, howling at an accidental light as if it reminded them of the moon; and with nothing, either of instinct or sensation, to tell them of the passing hours, or to explain the long-lost daylight. They shall see the lanterns more frequently." Effect of darkness on dogs.

During the course of the first winter they made several sledge excursions to the northward, and when not engaged in this way, they occupied themselves in hunting and in

CHAP. XIV.

taking scientific observations, besides the domestic routine of their little domicile. The doctor's graphic description of a day's occupations is most interesting:—

A day's occupation in winter.

"At six in the morning M'Gary is called with all hands who have *slept in*. The decks are cleaned, the ice-hole opened, the refreshing beef-nets examined, the ice-tables measured, and things aboard put to rights. At half-past seven all hands rise, wash on deck, open the doors for ventilation, and come below for breakfast. We are short of fuel, and therefore cook in the cabin. Our breakfast, for all fare alike, is hard tack, pork stewed, stewed apples frozen like molasses-candy, tea and coffee, with a delicate portion of raw potatoe. After breakfast the smokers take their pipe till nine; then all hands turn to, idlers to idle, and workers to work; Ohlsen to his bench, Brooks to his 'preparations' in canvas, M'Gary to play tailor, Whipple to make shoes, Bonsall to tinker, Baker to skin birds, and the rest to the 'Office.' Take a look into our Arctic Bureau! One table, one salt pork lamp with rusty chlorinated flame, three stools, and as many waxen-faced men with their legs drawn up under them, the deck at zero being too cold for the feet. Each has his department. Kane is writing, sketching, and projecting maps; Hayes copying logs and meteorologicals; Sontag reducing his work at Fern Rock; a fourth, as one of the working members of the hive, has long been defunct; you will find him in bed studying 'Littells' Living Age.' At twelve, a business round of inspection, and orders enough to fill up the day with work. Next, the drill of the Esquimaux dogs,—my own peculiar recreation,—a dog-trot specially refreshing to legs that creak with every kick, and rheumatic shoulders that chronicle every descent of the whip. And so we get on to dinner-time, the occasion of another gathering, which misses the tea and coffee of breakfast, but rejoices in pickled cabbage and dried peaches instead.

Continued.

"At dinner as at breakfast the raw potatoe comes in, our hygienic luxury. Like doctor-stuff generally, it is not as appetizing as desirable. Grating it down nicely, leaving

out the ugly red spots liberally, and adding the utmost oil as a lubricant, it is as much as I can do to persuade the mess to shut their eyes and bolt it. Two absolutely refuse to taste it.

A day's occupation in winter.

"Sleep, exercise, amusement, and work at will, carry on the day till our six o'clock supper, a meal something like breakfast, and something like dinner, only a little more scant; and the officers come in with the reports of the day. Doctor Hayes shows me a log, I sign it; Sontag the weather, I sign the weather; Mr. Bonsall the tides and thermometers. Thereupon comes in mine ancient Brooks, and I enter in his journal No. 3. all the work done under his charge, and discuss his labours for the morrow. M'Gary comes next, with the clearing up arrangements inside, outside, and on decks; and Mr. Wilson follows with ice-measurements; and last of all comes my own record of the day gone by; every line, as I look back upon its pages, giving evidence of a weakened body and harassed mind. We have cards sometimes, and chess sometimes, and a few magazines, Mr. Littell's thoughtful present, to cheer away the evening.

Continued.

"All this seems tolerable for common-place routine; but there is a lack of comfort which it does not tell of. Our fuel is limited to three buckets-full of coal a day, and our mean temperature outside is 40° below zero; 46° below as I write. London Brown Stout, and somebody's Old Brown Sherry, freeze in the cabin lockers; and the carlines overhead are hung with tubs of chopped ice, to make water for our daily drink. Our lamps cannot be persuaded to burn salt lard; our oil is exhausted, and we work by muddy tapers of cork and cotton floated in saucers. We have not a pound of fresh meat and only a barrel of potatoes left. Not a man now, except Pierre and Morton, is exempt from scurvy; and as I look round upon the pale faces and haggard looks of my comrades, I feel that we are fighting the battle of life at disadvantage, and that an Arctic night and an Arctic day age a man more rapidly and harshly than a year anywhere else in all this weary world."

CHAP. XIV.

Temperature.

This record of daily routine in their Arctic home was given in March—a month that turned out to be the coldest of the Polar year, although, in the experience of previous voyagers, February had proved the coldest month. The mean temperature in March was 41° below zero, while that of Parry in lat. 74° 30′ was only 29° below zero. It was observed that at such a low temperature the snow offered great resistance to the sledge-runners, the particles resembling fine dry sand, which creaked as the sledges passed over them.

Preparations for spring search.

During the winter Dr. Kane and his men busied themselves in making preliminary arrangements for the spring search after Sir John Franklin, as well as in providing for their daily necessities. Depôts of provisions were placed at considerable intervals along the intended line of search to facilitate the advance of sledge parties, and form a reserve on which to fall back in case of disaster. A party was also sent out under Dr. Hayes to explore the interior of the country and ascertain its resources as a hunting field. This party penetrated into the interior about ninety miles, when their progress was arrested by a glacier, 400 feet high, and extending to the north and west as far as the eye could reach. This magnificent body of interior ice formed on its summit a complete plateau—*a mer de glace*, abutting upon a broken plain of rock. They found no lakes, but saw a few reindeer at a distance, and numerous hares and rabbits.

Interior explored.

Rats!

Among other annoyances they were much pestered by rats during their residence in the Polar Regions. These creatures swarmed in every corner of the ship, ate or destroyed everything that they could, and at last became so insolent and insufferable that a determined effort was made to smoke them out. The crew set about this task with their usual vigour. The vilest possible compound of smells was created by vapours of brimstone, burnt leather, and arsenic. Then the hatches were shut and the rats left to enjoy their new atmosphere, while the men spent a cold night in a deck bivouac to give the experiment fair

play. The rats, however, survived the ordeal, so it was resolved to try the effect of burning charcoal. Accordingly, three stoves were started in full blaze, the hatches shut down, and every fissure that communicated aft pasted up, in order to give the enemy the full benefit of the fumigation. As the gas generated rapidly great caution had to be exercised, but Pierre Schubert, the cook, stole below, against orders, to season a soup, and well-nigh fell a victim to his professional zeal. Morton fortunately saw him staggering in the dark, and, reaching him with great difficulty as he fell, both were hauled up at last almost in a state of insensibility. Not long after this their vessel caught fire near one of the stoves, but before much damage was done Dr. Kane and a few of the men succeeded in extinguishing it. The doctor refers to this narrow escape with feelings of awe and thankfulness;—as well he might, for to have been burnt out of their wooden home in such a spot would have insured to them protracted sufferings and a miserable death.

Narrow escape from fire.

The winter of 1853, with its toils and trials, passed away and spring at length drew near. The first traces of returning light were observed on the 21st of January, when the southern horizon had for a short time a distinct orange tint. They had been nearing the sunshine for thirty-two days, and had just reached that degree of mitigated darkness which made the extreme midnight of Sir Edward Parry in latitude 74° 47′. An attempt was made to ascertain the solar influence on the 31st by means of two very sensitive daguerreotype plates, treated with iodine and bromine, but no impression whatever was made on them when exposed to the southern horizon at noon. The camera was used in-doors to escape the effects of cold.

First traces of returning light.

The thermometers about this period indicated remarkably low temperature. So cold did it become that they found it almost impossible to continue the magnetic observations in the observatory on Fern Island, which was in fact an ice-house of the coldest imaginable description, notwithstanding fires, buffalo-robes, and an arras of invest-

Thermometers.

CHAP. XIV.

ing sail-cloth. The mean temperature could not be kept up to the freezing point, and it was quite common to find the platform on which the observer stood fully 20° below zero.

Magnetic term-day.

Referring to the severe duties connected with this ice-house observatory, the doctor writes,—"Imagine it a term-day, a magnetic term-day. The observer, if he were only at home, would be the 'observed of all observers.' He is clad in a pair of seal-skin pants, a dog-skin cap, a rein-deer jumper, and walrus boots. He sits upon a box that once held a transit. A stove, glowing with at least a bucketful of anthracite, represents pictorially a heating apparatus, and reduces the thermometer as near as may be to ten degrees below zero. One hand holds a chronometer, and is left bare to warm it; the other luxuriates in a fox-skin mitten. The right hand and the left take it 'watch and watch about.' As one burns with cold, the chronometer shifts to the other and the mitten takes its place. Perched on a pedestal of frozen gravel is a magnetometer; stretching out from it, a telescope; and, bending down to this an abject human eye. Every six minutes said eye takes cognizance of a finely divided arc, and notes the result in a cold memorandum-book. This process continues for twenty-four hours, two sets of eyes taking it by turns; and, when twenty-four hours are over, term-day is over too."

Observations made under difficulties.

The doctor pleases to write facetiously on this subject, but a little thought will convince us that such work was no trifling matter at the time. It was the pursuit of science under the most trying circumstances, and at a time, too, when a severe battle was going on for the bare maintenance of life and health.

Thermometers.

On the 17th of January the thermometers stood at 49° below zero—on the 20th they ranged down to 67° below zero. On the 5th of February they indicated the—we might almost say—terrible temperature of 75° below zero, or 107° below the freezing point of water! At such temperatures chloric ether became solid, and carefully

DR. KANE IN THE MAGNETIC OBSERVATORY.

Perched on a pedestal of frozen gravel is a magnetometer; stretching out from it, a telescope, and bending down to this an object human eye.—Page 536.

CHAP. XIV.

ing sail-cloth. The mean temperature could not be kept up to the freezing point, and it was quite common to find the platform on which the observer stood fully 20° below zero.

Magnetic term-ma

Referring to the severe duties connected with this ice-[illegible] the [illegible] imagine it a term-[illegible] [illegible] if he were only [illegible] be [illegible] all observers.' He is [illegible] a pair of [illegible] cap, a reefing-[illegible] and [illegible] [illegible] is a transit [illegible] [illegible] of anthracite, [illegible] and reduces the thermometer as soon as may be to [illegible] degrees below zero. One hand holds a chronometer, and is left bare to warm it; the other [illegible] in a fox-skin [illegible]. The right hand and the left take it 'watch and watch about.' As one burns with cold, the chronometer shifts to the other and the mitten takes its place. Perched on a pedestal of frozen gravel is a magnetometer; stretching out from it, a telescope: and, bending down to this an object human eye. Every six minutes that eye takes cog-[illegible] of a [illegible] and notes the result in a [illegible] memorandum-book. This process continues for [illegible] hours, two sets of eyes [illegible] by turns: [illegible] [illegible] [illegible] the [illegible] [illegible] day is over.

Observations made under difficulties

The [illegible] [illegible] [illegible] on this subject, but a little [illegible] [illegible] convince us that such work was no trifling matter at the time. It was the pursuit of science under the [illegible] circumstances, and at a time, too, when a severe [illegible] was going on for the bare maintenance of life and [illegible].

Thermometers.

On the 17th of January the thermometers stood at 49° below zero—on the 20th they ranged down to 67° below zero. On the 5th of February they indicated the—we might almost say—terrible temperature of 75° below zero, or 107° below the freezing point of water! At such temperatures chloric ether became solid, and carefully

DR. KANE IN THE MAGNETIC OBSERVATORY.

Perched on a pedestal of frozen gravel is a magnetometer; stretching out from it, a telescope; and bending down to this an abject human eye.—Page 536.

prepared chloroform exhibited a granular pellicle on its surface. Spirit of naphtha froze at 54°, and oil of sassafras at 49°. The exhalations from the surface of the body invested the exposed or partially clad parts with a wreath of vapour. The air had a perceptible pungency upon inspiration, and when breathed for any length of time it imparted a sensation of dryness to the air-passages, inducing the men to breathe guardedly with compressed lips.

Intense cold.

The return of the sun was a gladsome event in the history of the sorely tried crew of the Advance. On the 21st of February the doctor started off to a hill-top with characteristic energy, despite scurvy and general debility, to welcome back the great luminary, which for some days past had been silvering the ice between the head-lands of the bay. We can fancy that he realized that day, more fully than he had ever done, the import of that passage in Scripture, "It is a blessed thing for the eyes to behold the sun."

Return of the sun.

From this time things began to wear a more favourable and cheerful aspect, and active preparations were made for the spring search, notwithstanding the loss of most of the dogs. Kane had counted on these noble animals as his chief reliance in the intended sledge operations, but during that severe winter nine splendid Newfoundlanders and thirty-five Esquimaux dogs had perished. Only six out of the whole pack remained, and even of this small number one was unfit for draught. Still, with these he resolved to push into the unknown regions of the north in search of Franklin and his comrades.

The dogs.

The first of the expeditions organized for the purpose of making a depôt of provisions in advance, was despatched on the 20th of March. The manner in which Kane started it was characteristic. The carpenter had urged him to use the Greenland sledge for this purpose, and he had agreed to this—although against his better judgment. "I saw the depôt party off yesterday," he writes. "They gave the usual three cheers, with three for myself. I gave them the whole of my brother's great wedding-cake and

Expedition to make depôt.

CHAP. XIV.

Start with the sledge.

my last two bottles of port, and they pulled the sledge they were harnessed to famously. But I was not satisfied. I could see it was hard work; and besides, they were without the boat, or enough extra pemmican to make their deposit of importance. I followed them, therefore, and found that they encamped at 8 P.M. only five miles from the brig. When I overtook them I said nothing to discourage them, and gave no new orders for the morning; but after laughing at good Ohlsen's rueful face, and listening to all Petersen's assurances that the cold, and nothing but the cold, retarded his Greenland sledge, and that no sledge of any other construction could have been moved at all through minus 40° snow, I quietly bade them good-night, leaving all hands under their buffalo-robes.

Another sledge fitted out.

"Once returned to the brig all my tired remainder-men were summoned. A large sledge with broad runners, which I had built somewhat after the neat Admiralty model sent me by Sir Francis Beaufort, was taken down, scraped, polished, lashed, and fitted out with track ropes and *rue-raddies* [shoulder belts]; the lines arranged to draw as near as possible in a line with the centre of gravity. We made an entire cover of canvas, with snugly adjusted fastenings; and by one in the morning we had our discarded excess of pemmican and the boat once more in stowage.

The sledge changed and sleepers surprised.

"Off we went to the camp of the sleepers. It was very cold, but a thoroughly Arctic night. The snow just tinged with the crimson stratus above the sun, which, equinoctial as it was, glared beneath the northern horizon like a smelting furnace. We found the tent of the party by the bearings of the stranded bergs. Quietly and stealthily we hauled away their Esquimaux sledge, and placed her cargo upon the 'Faith.' Five men were then rue-raddied to the tracklines, and, with the whispered word, 'Now, boys, when Mr. Brooks gives his third snore, off with you!' off they went, and the 'Faith' after them as free and nimble as a volunteer. The trial was a triumph: we awakened the sleepers with three cheers; and, giving them a second

good-bye, returned to the brig, carrying the dishonoured vehicle along with us. And now, bating mishaps past anticipation, I shall have a depôt for my long trip."

Disastrous expedition.

The party which started thus auspiciously were doomed to disappointment and disaster. Their final rescue by Dr. Kane and his enfeebled men, is one of the most heroic deeds on record in the annals of Arctic daring, and exhibits forcibly that indomitable energy and perseverance on the part of their leader, which was more than once the means of saving the little band of adventurers from destruction.

Unexpected arrival of absentees.

The depôt party had been absent upwards of a week, when, one night, towards midnight, those on board the brig heard steps approaching, and the next minute, three of the absentees, Sontag, Ohlsen, and Petersen, entered the cabin. Their manner startled Kane even more than their unexpected appearance on board. They were swollen and haggard, and hardly able to speak. Their story was a fearful one. They had left their companions on the ice, risking their own lives to carry the news to the brig. Brooks, Baker, Wilson, and Pierre (the remainder of the party), were lying frozen and disabled. Where? they could not tell; somewhere in among the hummocks to the north and east. It was drifting heavily round them when they parted. Irish Tom had remained behind to care for the others. Those who had thus pushed forward to tell the tale, were so worn out with fatigue and hunger, that they could scarcely be rallied sufficiently to point out the direction in which they had come.

Preparations to rescue the lost men.

Kane's first impulse was to start off at once; but where to search among the drifts was the difficulty that pressed most heavily on his mind. Instant action, however, was necessary, and Kane was not a man to lose a moment in such an emergency. Orders were promptly given, and as promptly obeyed. Ohlsen seemed to have his faculties more at command than the others, but if he accompanied the rescue party to point the way, it was clear that he must be carried, as he was sinking from exhaustion.

CHAP. XIV

While some of the men busied themselves in preparing food for, and attending to their disabled comrades, others were rigging out the sledge called the "Little Willie," with a buffalo cover, a small tent, and a package of pemmican.

Ohlsen carried along with them.

As soon as the arrangements could be hurried through, Ohlsen was strapped on in a fur bag, his legs wrapped in dog-skins and eider-down, and they were off upon the ice.

Starting of the rescue party.

This rescue party consisted of ten men, including Dr. Kane, almost all of whom would, in ordinary circumstances, have been placed on the sick list. But life and death were in the balance now, and every man nerved himself to the work. The thermometer stood at 70 degrees below the freezing point, nevertheless, they started with no other covering than the clothes on their backs. After sixteen hours' travel they lost their way. Ohlsen, who had been for fifty hours without rest, fell asleep the moment they began to move, and awoke with unequivocal signs of mental disturbance, so that the poor fellow became a useless incumbrance to the party. Dr. Kane knew that the lost men must be within a radius of forty miles from where they stood, but there was nothing to indicate the point of the compass towards which they ought to travel. Pushing ahead of the party, Kane clambered over some rugged ice-piles, from which he descried a long level floe, which, he thought, might probably attract the eyes of weary men in circumstances like their own. Here he gave orders to pitch the tent, abandon the sledge, and disperse on foot in all directions. The thermometer had now fallen to 49° below zero, and a sharp breeze was blowing from the north-west, so that it was absolutely impossible to prevent themselves from freezing except by unremitting and vigorous exercise. They could not even melt water for drink, and any attempt to eat snow was instantly followed by bloody lips.

The search.

The men now spread themselves in all directions. "But though they all obeyed heartily," says Kane, "some painful impress of solitary danger, or perhaps it may have been

the varying configuration of the ice-field, kept them closing up continually into a single group. The strange manner in which some of us were affected I now attribute as much to shattered nerves as to the direct influence of the cold. Men like M'Gary and Bonsall, who had stood out our severest marches, were seized with trembling fits and short breath; and, in spite of all my efforts to keep up an example of sound bearing, I fainted twice on the snow.

Traces of lost party found.

"We had been nearly eighteen hours out without water or food, when a new hope cheered us. I think it was Hans, our Esquimaux hunter, who thought he saw a broad sledge-track. The drift had nearly effaced it, and we were some of us doubtful at first whether it was not one of those accidental rifts which the gales make in the surface snow. But as we traced it on to the deep snow among the hummocks, we were led to footsteps; and, following these with religious care, we at last came in sight of a small American flag fluttering from a hummock, and, lower down, a little Masonic banner hanging from a tent-pole, hardly above the drift. It was the camp of our disabled comrades. We reached it after an unbroken march of twenty-one hours."

The tent discovered.

The doctor was not the first to reach the tent, but on coming up, he found the men standing silently in file on each side of it. With a kindness and delicacy of feeling that might scarcely have been looked for, they intimated their wish that he should enter first. Crawling in, Kane was received with a burst of joyful welcome by the four poor fellows who were stretched on their backs. "They had expected him; they were sure he would come!" And well might they trust him, for their noble-hearted leader never failed his comrades in the hour of need.

Trying situation.

They were now fifteen souls; the thermometer 75° below the freezing point, and their sole accommodation a tent, barely able to hold eight men. Half of the worn-out party had therefore to keep themselves from literally freezing to death, by walking up and down outside while the others

CHAP. XIV.

Arrangements for the sick.

slept. Each party slept for two hours, and then they prepared for the homeward march—a journey of fifty hours. The sick men, with their limbs sewed up in deer-skins, were lashed on a sledge, and so rolled up in furs that only an opening opposite their mouths was left for breathing. The operation of stripping, refreshing, and packing the men, cost their rescuers four hours of hard labour, and several frost-bitten fingers. After repeating a short prayer, they started for the ship.

But terrible was the trial they underwent before reaching it. The ice was almost impassably rough, and the sledload of men very heavy, and before they got to within nine miles of the tent they had pitched on the floes, the energies of the whole party failed, almost without premonition. Bonsall and Morton, two of the stoutest men, begged permission to lie down on the snow and sleep,—"They were not cold; the wind did not enter them now; a little sleep was all they wanted." Presently Hans was found nearly stiff under a drift; Thomas, bolt upright, had his eyes closed and could hardly articulate, and John Blake threw himself down and refused to rise. Aware of their extreme peril, Dr. Kane wrestled, boxed, ran, argued, jeered, and reprimanded in vain. A halt was called, the tent pitched with great difficulty, the sick men placed within it, and as many of the others as it could hold. Without food, without fire, and without spirits (for even the whisky had frozen), they huddled together in deep sleep, while their indomitable captain pushed forward with William Godfrey, leaving orders for the party to follow after four hours' rest. His object was to reach the tent, make a fire, thaw some snow and pemmican, before the others should arrive. The two went forward, they scarce knew how, in a sort of stupor, and reached the tent in four hours. They retained a confused recollection of what happened by the way, but they remembered seeing a bear which walked leisurely before them, and tore up, as he went, a jumper that M'Gary had thrown away the day before. It also overturned the tent, but went away without doing any further injury.

Effects of fatigue and cold.

A bear seen.

On arriving, they crept into their sleeping bags without speaking, and instantly fell into profound slumber, from which the doctor awakened to find his long beard a mass of ice, and fast frozen to the buffalo skin. Godfrey had to cut him out with a jack knife. When the party rejoined them, hot soup was prepared, and after a short rest they continued the journey. But the broken ice became worse and worse, so that their progress was slow and tedious. Halts, too, had to be made more frequently, and on these occasions they fell, half-sleeping, on the snow. The doctor could not prevent it, so he timed the men, and allowed them three minutes sleep at a time. Short though it was, this homœopathic dose of slumber did them good. At last they reached the brig, but in such a state of mental and bodily prostration, that they were quite delirious, and moved about like men in a dream. A few days after, Kane writes in his journal: "The rescued men are not out of danger, but their gratitude is very touching. Pray God that they may live!"

Difficulties and trials of the journey.

They did live, with one exception. Jefferson Baker died of lock-jaw, and was buried on Fern Rock.

Baker's death.

Soon after this a party of Esquimaux arrived at the brig, and an intimacy was begun with these simple inhabitants of the north which lasted, almost unbroken, till the voyagers left their winter home. They hunted together, travelled together, and frequently slept together in the snow villages which were built, often, in a few hours.

Esquimaux.

In the month of April 1854, the first exploring party started, under command of Dr. Kane. It consisted of himself and seven men, with a dog-sledge. "This was," says the leader, "to be the crowning expedition of the campaign, to attain the Ultima Thule of the Greenland shore, measure the waste that lay between it and the unknown West, and seek round the furthest circle of the ice for an outlet to the mysterious channels beyond." This journey was undertaken under the most disadvantageous circumstances, the men being reduced in strength and health; but it was carried on with unflagging energy in

First exploring party sets out.

CHAP. XIV.

Provisions destroyed.

the face of inconceivable difficulties. At one point they were almost stopped by the depth and softness of the snow; at another they found that the bears had destroyed the cache of provisions, on which they chiefly depended, and worse than all, symptoms of scurvy began to break the men down. Dr. Kane himself had to be strapped on the sledge and dragged along for some time, having frozen his foot, besides being so unwell as to become delirious. Dr. Hayes, in his report, says of Kane, that he was carried to the brig nearly insensible by the more able-bodied men of the party, and so swollen from scurvy as to be hardly recognisable. His recovery at the time was regarded as nearly hopeless. But about this time another of the party was struck down.

Schubert's death.

The doctor writes thus:—"Poor Schubert is gone. Our gallant, merry-hearted companion left us some ten days ago, for, I trust, a more genial world. It is sad, in this dreary little homestead of ours, to miss his contented face, and the joyous troll of his ballads."

Dr. Hayes' journey.

Although foiled, the crew of the Advance were not disheartened. Dr. Hayes, being almost the only fresh man on board, was sent out with a dog-sledge and party, on an expedition to the north, on the 20th May. He was to cross Smith's Straits, and make, as near as possible, a straight course for Cape Sabine. On the 1st of June he returned, and had to be led to Kane's bedside to make his report, being perfectly snow-blind. The gallant surgeon did not cease to advance on this journey until they broke down—dogs and all. For some time they were so affected by snow-blindness as to be obliged to encamp until they got better. The highest latitude reached was 79° 45′ north, longitude, 69° 12′ west. The coast here trended to the westward, and was sighted for thirty miles to the northward and eastward. This was the culminating point of Dr. Hayes' survey. Two large headlands, Capes Joseph Leidy and John Frazer, indicate it.

Morton's expedition.

Another expedition was set on foot in June, and placed under the command of Morton. On this journey they proceeded as far north as latitude 81° 22′ north, and dis-

covered an open ocean entirely free from ice. A lofty cape here baffled all his efforts to advance. It was named Cape Constitution. There, from a height of 480 feet, which commanded a horizon of almost forty miles, his ears were gladdened with the novel music of dashing waves. "Beyond this cape all is surmise. The high ridges to the north-west dwindled off into low blue knobs, which blended finally with the air." Animal life was extremely abundant. The furthest north point of land seen was named Mount Edward Parry, in latitude 82° 30′, longitude 66° west. CHAP. XIV. Open Polar basin.

Here, then, was a discovery that seemed to justify the theory of an open polar basin, and earnestly did Dr. Kane long to launch forth upon its bright and lonely waters; but it had been otherwise ordained. The Advance was not freed from the ice that season, and the approach of another winter found her still locked in the cold, but irresistible, embrace of Renssellaer Harbour.

Seeing that there was little hope of release that year, Dr. Kane planned a boat expedition to Beechy Island, to communicate with Sir Edward Belcher's squadron, and procure supplies for another winter. About the middle of July the attempt was made most energetically, but failed; and they returned to the brig about the beginning of August. A last effort was then made to extricate the brig from her ice-cradle by means of sawing, blasting, &c., but without success. The prospect, indeed, was hopeless. They were beset by heavy ice which grounded on the shallows, and long chains of icebergs also took the ground in their neighbourhood, and obstructed the passage of the floes. At last the young ice began to form, and the winter of 1854 closed in on the luckless crew. Boat expedition to Beechy Island.

The prospect was indeed dreary. Sick in mind and body, without fresh provisions and short of fuel, they had to face the tedium of another long and dreary winter. On August 20, the journal entry runs thus: "*Sunday.* Rest for all hands. The daily prayer is no longer, 'Lord, accept our gratitude and bless our undertaking,' but 'Lord, accept our gratitude and restore us to our homes.' The ice shows Another winter closes round them.

CHAP. XIV.

no change; after a boat and foot journey around the entire south-eastern curve of the bay, no signs!"

Council of the crew summoned.

Dr. Kane now made up his mind, ill prepared though he was, to stand by the brig for another winter; but, feeling that he had no right to expect that his men would run similar risk, he summoned a council of the crew, stated their circumstances and prospects, and left it to themselves to remain or to attempt the long and dangerous journey to the south Greenland colonies. Eight agreed to remain. The others, nine in number, left the brig with a fair share of food and stores on the 28th August, and with a written assurance that, should they be compelled to return, they would receive "a brother's welcome." One of the men returned a few days afterwards; but weary months went by before the rest were driven back to their old home in Renssellaer Harbour.

We cannot enter into the details of the sufferings heroically endured by the doctor and his gallant crew during the succeeding winter. The following extract shows the risks they sometimes ran while seal-hunting. Dr. Kane and his Esquimaux hunter were on their dog sledge travelling out on the floes: "Hans sang out at the top of his voice, 'Pusey! puseymut! seal! seal!' At the same instant the dogs bounded forward, and as I looked up, I saw crowds of grey netsik—the rough or hispid seal of the whalers—disporting in an open sea of water.

Dangers of seal hunting.

Unsafe ice.

"I had hardly welcomed the spectacle when I saw that we had passed upon a new belt of ice that was obviously unsafe. To the right, and left, and front, was one great expanse of snow-flowered ice. The nearest solid floe was a mere lump, which stood like an island in the white level. To turn was impossible; we had to keep up our gait. We urged on the dogs with whip and voice, the ice rolling like leather beneath the sledge runners. It was more than a mile to the lump of solid ice. Fear gave the poor beasts their utmost speed, and our voices were soon hushed to silence.

"The suspense, unrelieved by action or effort, was in-

tolerable. We knew that there was no remedy but to reach the floe, and that everything depended on our dogs, and our dogs alone. A moment's check would plunge the whole concern into the rapid tideway. No presence of mind or resource, bodily or mental, could avail us. This desperate race against fate could not last. The rolling of the tough salt-water ice terrified our dogs; and when within fifty paces of the floe they paused. The left hand runner went through; our leader, 'Toodlamick,' followed, and in one second the entire left of the sledge was submerged. My first thought was to liberate the dogs. I leaned forward to cut poor Tood's traces, and the next minute was swimming in a little circle of pasty ice and water alongside him. Hans, dear good fellow, drew near to help me, uttering piteous expressions in broken English; but I ordered him to throw himself on his belly, with his hands and legs extended, and to make for the island by cogging himself forward with his jack-knife. In the mean time—a mere instant—I was floundering about with sledge, dogs, and lines, in confused puddle around me.

Dr. Kane and Hans break through the ice.

"I succeeded in cutting poor Tood's lines and letting him scramble to the ice, for the poor fellow was drowning me with his piteous caresses, and made my way for the sledge; but I found that it would not buoy me, and that I had no resource but to try the circumference of the hole. Around this I paddled faithfully, the miserable ice always yielding when my hopes of a lodgment were greatest. During this process I enlarged my circle of operations to a very uncomfortable diameter, and was beginning to feel weaker after every effort. Hans meanwhile had reached the firm ice and was on his knees, like a good Moravian, praying incoherently in English and Esquimaux. At every fresh crushing in of the ice he would ejaculate 'God!' and when I recommenced my paddling he recommenced his prayers.

Imminent danger of Dr. Kane.

"I was nearly gone. My knife had been lost in cutting out the dogs; and a spare one which I carried in my trousers-pocket was so enveloped in the wet skins that I

CHAP. XIV.

His efforts to escape.

could not reach it. I owed my extrication at last to a newly-broken team dog, who was still fast to the sledge, and in struggling carried one of the runners' chock against the edge of the circle. All my previous attempts to use the sledge as a bridge had failed, for it broke through, to the much greater injury of the ice. I felt it was a last chance. I threw myself on my back, so as to lessen as much as possible my weight, and placed the nape of my neck against the rim or edge of the ice; then with caution slowly bent my leg, and, placing the ball of my moccassined foot against the sledge, I pressed steadily against the runner, listening to the half yielding crunch of the ice beneath.

Saved!

"Presently I felt that my head was pillowed by the ice, and that my wet fur jumper was sliding up the surface. Next came my shoulders; they were fairly on. One more decided push and I was launched upon the ice and safe. I reached the ice-floe and was frictioned by Hans with frightful zeal. We saved all the dogs, but the sledge, Kayack, tent, guns, snow-shoes, and everything besides were left behind. The thermometor at 8° will keep them frozen fast in the sledge till we can come and cut them out."

Trials and vicissitudes.

Their exploits with bears and walrus in company with natives were numerous, and always more or less accompanied with danger. But at times they were totally deserted by natives, bears, and walrusses, and scurvy broke them down so thoroughly that there was scarcely a man of the whole crew fit even for the lightest duties, and Dr. Kane himself had at last to undertake the cleaning and cooking of the ship. Despite all this he planned future lines of search, but was never permitted to carry them out. It soon became evident that the ship was destined to remain for ever, a monument of baffled enterprise, in Renssellaer harbour. On the 20th of May 1855, the crew quitted the brig and made for the open water to the south, dragging their boats on sledges after them. But many a long day and night of toil and trial did they undergo ere they reached the south Greenland

The brig abandoned.

settlements, and many a hair-breadth escape they had in traversing the solid ice plains under sail as if they were actually on the open sea, and in afterwards ploughing through the ice-encumbered ocean.

Kindness of the Esquimaux.

Sometimes they received help from the Esquimaux. Once their sledge broke so far through the ice that the boat floated off. "Just then," says Kane, "seven of the natives came up to us—five sturdy men, and two almost as sturdy women—and without waiting to be called on, worked with us most efficiently for more than half a day, asking no reward." In the course of the voyage another of their comrades, Ohlsen, was struck down by death, and was interred near a cape which now bears his name. More than once they were nearly nipped by the floes, and towards the end of their voyage they were on so short allowance of food that they had scarce strength left to manage their boats, and were on the point of being starved to death, when, providentially, they came on a seal which was seemingly fast asleep on a lump of ice. "But," writes Kane, "he was not asleep, for he reared his head when we were almost within rifle-shot; and to this day I can remember the hard, careworn, almost despairing expression of the men's thin faces as they saw him move: their lives depended on his capture."

Death of Ohlsen.

The starving men shoot a seal.

Providentially they got within range and shot the seal dead. "I would have ordered another shot," continues the narrative, "but no discipline could have controlled the men. With a wild yell, each vociferating according to his own impulse, they urged both boats upon the floes. A crowd of hands seized the seal and bore him up to safer ice. The men seemed half crazy. I had not realized how much we were reduced by absolute famine. They ran over the floe, crying, and laughing, and brandishing their knives. It was not five minutes before every man was sucking his bloody fingers or mouthing long strips of raw blubber."

This was the beginning of good fortune. Soon after, more seals were shot, and in a few days they neared the Danish settlements. There is something inexpressibly

CHAP. XIV.

touching in the simple record of the feelings that gushed over these heart-tried men as they heard the first sound of the voice of civilized man. It was a misty day, and they were toiling at the oars when a faint "halloo" was heard.

First sound of a civilized voice.

"'Listen, Petersen! oars, men!' 'What is it?'—and he listened quietly at first, and then, trembling, said in a half whisper, Dannemarkers! . . . . By-and-by the single mast of a small shallop showed itself; and Petersen, who had been very quiet and grave, burst out into an incoherent fit of crying."

The crew of the Advance reach the Danish settlements.

About the beginning of August they landed in safety at the Danish settlements, having lived for eighty-four days in the open air. "Our habits," says Kane, "were hard and weatherworn. We could not remain within the four walls of a house without a distressing sense of suffocation. But we drank coffee that night before many a hospitable threshold, and listened again and again to the hymn of welcome, which, sung by many voices, greeted deliverance."

Here the long lost mariners learned that Sir John Franklin had perished nearly a thousand miles to the south of where they had been searching for him; and here, too, they met the squadron of the gallant men who had been sent out to search for them. Dr. Kane and his men went out to meet them in the little boat that had carried them through many miles of ocean. "Presently," he writes, "we were alongside. An officer, whom I shall ever remember as a cherished friend, Captain Hartstene, hailed a little man in a ragged flannel shirt—'Is that Dr. Kane?' and with the 'Yes!' that followed, the rigging was manned by our countrymen, and cheers welcomed us back to the social world of love which they represented."

Meeting with Captain Hartstene.

The kind heart and gallant spirit that had battled so long and so bravely with the northern ice was soon called to another world where love reigns supreme. A constitution which had never been strong was irreparably shattered by the severe trials and privations it had undergone. Dr. Elisha Kent Kane died at Havannah in February 1857.

Death of Dr. Kane.

Just at the conclusion of Dr. Kane's voyage, another

Nature and objects of the expedition.

expedition by land was in course of preparation. This expedition was fitted out and conducted by the Hudson's Bay Company. It consisted of a bark canoe, and was placed under the command of Messrs Anderson and Stewart, gentlemen in the service of the company. Its object was to proceed down the Great Fish River to its mouth, and examine Montreal Island and its neighbourhood, near which, according to Esquimaux reports, Franklin and his followers perished.

They set out for the mouth of the Great Fish River.

Little more was accomplished by this expedition than the corroboration of the report brought home by Dr. Rae. They set out on their journey on the 22d June 1855, and on their way down the river fell in with Esquimaux with whom were seen various articles which had evidently belonged to a boat—such as tentpoles, paddles, &c., formed out of ash oars, and pieces of oak, elm, mahogany, and pine; also, copper and sheet iron boilers, tin soup-tureens, pieces of instruments, a letter-nip dated 1843, and sundry tools,—all of which, they were informed, had come from a boat, and that the white men who owned it had been starved to death. This information was conveyed to them by signs, as none of the party could speak the Esquimaux language. About the end of August they reached Montreal Island which was carefully examined, and several Esquimaux câches were found containing chain-hooks, chisels, a bar of unwrought iron, and several other articles; a small piece of stick was also found, on which was cut "Mr. Stanley," surgeon of the '*Erebus*.' A piece of wood was also found with the word '*Terror*' cut on it. But not a scrap of paper could be found; and although a strict search was made on the island and on the neighbouring main, not a vestige of the remains of the unfortunate crew was discovered. After a ten days' search the expedition returned to winter quarters. It seems to have been a strange oversight to have sent off an expedition of this kind—which was designed to make a thorough investigation—without an interpreter! Little could have been expected from it, and we are not surprised that little was accomplished.

Relics found on Montreal Island.

CHAPTER XV.

Expedition under Captain M'Clintock—Discovery of a Record of the lost Expedition, and the fate of Sir John Franklin.

Voyage of Captain M'Clintock in the Fox—First Winter spent in the Pack of Baffin's Bay—Dangers of Disruption—Deliverance and Advance—Winter in Bellot's Strait—Autumn and Spring Travelling Parties—Discovery of Remains of the Franklin Expedition—Lieutenant Hobson's Discovery of a Boat and a "Record," which intimates the Death of Sir John Franklin—Skeletons and numerous Relics of the lost Crews found—Discoveries of Captain Young—Return Home—Franklin's Party the first to discover the North-West Passage—Proposed Expedition by the Americans towards the Pole.

CHAP. XV.

Preliminary remarks.

THE voyage of the Fox in the Arctic Seas in the years 1857, '58, and '59 (recently published), brings down the history of Polar Seas and Regions to the present time, and clears up the mystery of the fate of the Franklin Expedition, the search for which has been so long and so energetically carried on by Great Britain and also by America. It is now ascertained beyond doubt, from a document discovered in the Arctic Regions, that the crews of the Erebus and Terror perished while travelling on foot over the ice towards the mouth of the Great Fish River, that the gallant Sir John Franklin was *the discoverer* of the North-West Passage, and that he died on the 11th of June 1847. No detailed records of the ill-fated expedition have been found,—no letters or documents to afford us the melancholy satisfaction of dwelling on the last moments and the last words of the leader. Enough, and only enough, has been reclaimed from the Arctic Seas to assure us that all have perished. It seems as if the Almighty had mercifully permitted one mysterious whisper from the unseen world to reach us, to allay that anxiety which has

No detailed records of the Franklin expedition found.

so long been felt by the nation, and burdened the hearts of the noble-spirited Lady Franklin and the relations of the lost crews.

Before proceeding with our epitome of Captain M'Clintock's most interesting journal, it may be well to remind the reader of the state of Arctic research at the time of the Fox's setting sail.

State of Arctic search at the time the Fox set sail.

It will be remembered that the last expeditions which returned in 1854 added nothing to the intelligence previously ascertained, namely, that the Erebus and Terror had spent their first winter (1845–46) at Beechy Island, from which they departed without leaving any discoverable record of their past doings or future intentions. The next information we have of the lost ships was brought by Dr. Rae, who, as we have seen, was told by the Esquimaux, later in the same year (1854), that forty white men had been seen on the west coast of King William Land in the spring of 1850, who were travelling southward, and were supposed to have perished at the mouth of a large river, which Rae concluded must be the Great Fish River.

Continued.

In the following year (1855), as has been shown, the Hudson's Bay Company fitted out a canoe expedition which, under the command of Mr. Anderson, one of their own officers, explored the Great Fish River from the interior to its mouth. Anderson did little more than prove the correctness of Rae's supposition. He found that part of the missing crews had been on Montreal Island, at the mouth of that river, and he discovered a few relics, but having no interpreter, he could hold no intercourse with the Esquimaux except by signs. Unfortunately, his slender bark canoes were almost worn out by the rough treatment they had experienced in descending the turbulent rapids and crossing the rough portages of that river to the sea, so that he was compelled to discontinue the search at that very point beyond which it might have been prosecuted with good hope of a successful issue.

On Mr. Anderson's return, it seemed as if the Government of this country had abandoned all hope of discovering

CHAP. XV.

the remains of the Franklin expedition. It was generally believed that there could not now be a survivor of the unfortunate crews, and, believing that any further search, while it could not save life, would be incurring needless risk, and entailing unnecessary expense, it was resolved that the attempt should be finally abandoned.

Lady Franklin's perseverance.

The feelings that still actuated the sorrowing but brave heart of Lady Franklin, who had herself fitted out three expeditions, still urged her to "hope against hope." Having appealed most earnestly, but unsuccessfully, to Government, she resolved once more to fit out an expedition at her own expense. She was backed in this noble effort by many of Sir John Franklin's friends, who, resolving that she should not bear the entire expense of such an undertaking, subscribed largely towards it. The Government also, when the project was regularly set on foot, came forward with supplies of stores and much of the needful *materiel* of an Arctic voyage, so that, although the season of 1856 had been lost by Lady Franklin in vain entreaties, there was now an activity and enthusiasm in the preparations which guaranteed that there should be no further delay.

Correctness of Dr. King's opinion proved.

It is worthy of remark here, that the news brought home by the Fox is singularly corroborative of the correctness of the opinion of Dr. King as to the whereabouts of the missing ships. Referring to this subject, a writer in the *Medical Times* says:—

"The news recently brought home as to the fate of Sir John Franklin shows very remarkably the fault committed by Government in neglecting to follow the advice of a well-known member of our profession, Dr. King. It is now known that Franklin's ships were wrecked close to an island—King William's Island—lying off the western land of North Somerset; and traces of the expedition have been found on the southern shore of this island, at Point Ogle on the continent of America, and at Montreal Island in the estuary of the Great Fish River. Now, in February 1845, Dr. King proposed to Lord Grey, then

Colonial Secretary, to go by the Great Fish River to the western land of North Somerset to aid the Franklin expedition in its survey. Two years afterwards, when anxiety was felt for the fate of the expedition, Dr. King made his second offer to Lord Grey to go by the same route to the same coast to search for and assist the expedition in its difficulty. The letter making this offer was dated June 10, 1847, and, curiously enough, it is now shown that Franklin died on the 11th of June, one day only after this letter was written, near the very spot which Dr. King proposed to explore. After Franklin's death, it appears from the records found by Captain M'Clintock, 105 survivors were on the road to the Great Fish River in April 1848; so that had Dr. King's proposals of 1845 and 1847 been accepted, he must have met the party and rescued them. Year after year Dr. King reiterated his warnings and offers, and in 1856 memorialized the Admiralty to arrange a combined effort by sea and land, again directed to the precise spot where the remains of the expedition have been found. Had his offers been accepted, not only would our gallant countrymen have been rescued, but no necessity would have arisen for the expeditions of Ross, Richardson, Collinson, Austin, Penny, Belcher, or Kellett, at a Government expense of two millions; nor for the private expeditions under Ross, Kennedy, and M'Clintock, or the American efforts of De Haven and Kane."

Dr. King's proposals to Government.

Lady Franklin's first care was to provide a suitable vessel and an able commander. A screw steam yacht, named the Fox, of 177 tons burthen, was purchased by her at a cost of £2000 in the spring of 1857, and the command of her was offered to, and at once accepted by, Captain M'Clintock, R.N., a gentleman who had already served in three previous expeditions, from 1848 to 1854, and who, besides being eminently fitted for the work, by long experience in Arctic travel, and by scientific attainments, also had his "whole heart in the cause."*

The Fox purchased and M'Clintock appointed to command her.

* We are happy to learn that the gallant M'Clintock has recently been knighted.

CHAP. XV.

Refitting of the Fox.

Before proceeding to sea, the Fox had to undergo a complete refit. The velvet hangings and splendid furniture, and everything not constituting a part of the vessel's strengthening, were removed. The large sky-lights and capacious ladder-ways were reduced to limits more adapted to a Polar clime. The whole vessel was externally sheathed with stout planking, and internally fortified by strong cross beams, longitudinal beams, iron stanchions, and diagonal fastenings; the false keel was taken off; the slender brass propeller replaced by a massive iron one; the boiler taken out, altered, and enlarged; the sharp stem was cased in iron until it resembled a ponderous chisel set up edgeways, and the rig considerably altered. "Internally the little vessel was fitted up with the strictest economy in every sense, and the officers were crammed into pigeonholes, styled cabins, in order to make room for provisions and stores." The mess-room, for five persons, measured eight feet square.

Stores, supplies, provisions, &c.

Of course the stores and supplies of every kind were ample and of the best quality. Powder and shot, rockets, maroons, and signal-mortars; ice anchors, saws, and claws; pemican and provisions of every kind for twenty-eight months, besides scientific instruments were supplied by Government. In short, few vessels ever left our shores so well, and none better, fitted out for an Arctic cruise; but then, it must be remembered that few, if any, expeditions have set forth on such a hazardous enterprise as this; for, while most other ships have gone in twos and threes to dare the dangers of the ice, and in later years these northern seas have been crowded with ships of every shape and size, the Fox set out on her voyage *alone* at a period in Arctic history when all other vessels had returned home discomfited—all, at least, that had not shared the fate of Franklin, and been wrecked in the Polar Seas.

British "pluck."

British "pluck" is well known. At the very outset this expedition called it forth. M'Clintock, in writing on the subject, says,—"Expeditions of this nature are always popular with seamen, and innumerable were the applica-

tions sent to me; but still more abundant were the offers to 'serve in any capacity' which poured in from all parts of the country, from people of all classes, many of whom had never seen the sea." It is this chivalrous love of difficult and dangerous work, this dare-anything spirit of enterprise, that has contributed so largely to make Britain what she is.

Crew of the Fox.

The crew of the Fox—in addition to Captain M'Clintock, Lieutenant W. R. Hobson, R.N., Captain Allen Young, who joined as sailing-master, and David Walker, M.D., who volunteered for the post of surgeon—consisted of twenty-one men, among whom we find the name of Carl Petersen, the Esquimaux interpreter, familiar to all who have read the account of the expeditions under Captain Penny and Dr. Kane.

Lady Franklin bids them farewell.

On the last day of June 1857 Lady Franklin went on board the Fox to say farewell and bid them God-speed. Her "instructions" to M'Clintock might well be taken as a pattern by the Admiralty. Placing unlimited confidence in the man to whom she had committed the charge of her expedition, she simply wrote him a short letter explaining what she wanted him to do, and left it to his own judgment to determine how to do it.

Her "instructions."

"As to the objects of the expedition and their relative importance," she wrote, "I am sure you know that the rescue of any possible survivor of the Erebus or Terror would be to me, as it would be to you, the noblest result of our efforts. For this object I wish every other to be subordinate; and next to it in importance is the recovery of the unspeakably precious documents of the expedition, public and private, and the personal relics of my dear husband and his companions. And lastly, I trust it may be in your power to confirm, directly or inferentially, the claims of my husband's expedition to the earliest discovery of the passage, which, if Dr. Rae's report be true (and the Government of our country has accepted and rewarded it as such), these martyrs in a noble cause achieved at their last extremity, after five long years of labour and suffering, if not at an earlier period."

CHAP. XV.

Intended plan of search.

The intended plan of search was, first, to touch at some of the Danish settlements in Greenland to purchase sledge-dogs; then to proceed to Beechy Island, and there to fill up stores from the depôt left by Sir E. Belcher. Next, to endeavour to proceed down Peel Sound (supposed to be a strait), but, failing by that channel, to try down Regent's Inlet, and by the supposed Bellot Straits to reach the neighbourhood of the Great Fish River. They were to search the adjacent shores during the summer of 1857 and following spring, and then return home either by the Atlantic, or through Behring's Straits and across the Pacific.

Sailing of the Fox for the Polar Seas.

On the 1st of July 1857 the Fox set forth on her lonely voyage, and on the 12th of the same month they sighted Greenland. As one of the men had showed symptoms of diseased lungs the captain determined to land him at Fredericksh aab. In order to accomplish this it was necessary to force their vessel through the remarkable and dangerous stream known as the Spitzbergen current, which carries a thick pack of heavy ice down the eastern coast of Greenland, round the cape, and up along the western coast for a distance of 250 miles. The whalers dread this current, for many good ships and valuable lives have been lost there, and it blockades the ports of south Greenland during the greater part of the summer. The Spitzbergen current, however, like everything else in this world, has its good points. It conveys to the shores of the Greenlander an immense number of bears and seals, and furnishes him with a large and valuable supply of drift wood from the rivers of Siberia.

Arrival at Frederick-shaab.

The Fox forced this barrier in safety, and reached Frederickshaab in time to procure a homeward passage for the ailing seaman. Referring to these Danish colonies, M'Clintock says,—"For trading purposes Greenland is monopolized by the Danish Government. Its Esquimaux and mixed population amount to about 7000 souls. About 1000 Danes reside constantly there for the purpose of conducting the trade, which consists almost exclusively in

The Danish Colonies of Greenland.

the exchange of European goods for oil and the skins of seals, reindeer, and a few other animals. The Esquimaux are not subject to Danish laws, but, although proud of their nominal independence, they are sincerely attached to the Danes, and with abundant reason. A Lutheran clergyman, a doctor, and a schoolmaster, whose duty it is to give gratuitous instruction and relief, are paid by the Government, and attached to each district; and when these improvident people are in distress, which not unfrequently happens during the long winters, provisions are issued to them free of cost. Spirits are strictly prohibited. All of them have become Christians, and many can read and write."

Voyage continued to Disco Island.

Continuing the voyage they reached the island of Disco on the 31st of July. Here they met with the commanders of two whale-ships that had been crushed to pieces by the ice in Melville Bay a few weeks before. Captain M'Clintock speaks of Disco fiord as the most enticing spot in Greenland for a week's shooting, fishing, and yachting; hares, ptarmigan, wild-ducks, and splendid salmon trout being abundant. Having procured some Esquimaux dogs and a native driver named Christian, besides a supply of smoked and dried salmon trout, they pushed out into the ice-laden waters of Baffin's Bay. In passing part of the Disco shore a low range of sandstone cliffs were seen, in which there were horizontal seams of coal. The opportunity was too good to neglect. The anchor was let go and coaling vigorously commenced forthwith.

Christian, the Esquimaux.

Their Esquimaux, Christian, was a volunteer, about twenty-three years of age, unmarried, and an orphan. When he came on board the men soon thoroughly cleaned and cropped him, soap and scissors being novelties to an Esquimaux. They then rigged him in sailors' clothes. He was evidently not at home in them, but was not the less proud of his improved appearance.

At the little settlement of Proven, and also at Upernivick, more dogs and food were obtained, and on the 7th of August, having landed the last letters for home, they set

CHAP. XV.

sail, and soon left the last traces of semi-civilized human life behind them.

Foiled in attempting to cross Baffin's Bay.

An attempt was now made to cross Baffin's Bay by penetrating the "middle ice," the edge of which they reached about seventy miles to the west of Upernivick; but it was found to be impenetrably packed together, so that although they ran along its edge for forty miles, no passage could be found. Pushing northward, therefore, in search of an opening, they reached Melville Bay on the 12th, and sighted a magnificent glacier—the parent of many icebergs that floated round them.

Magnificent glacier of Melville Bay.

"There is much," writes M'Clintock, "to excite intense admiration and wonder around us. One cannot at once appreciate the grandeur of this mighty glacier, extending unbroken for forty or fifty miles. Its sea-cliffs, about five or six miles from us, appear comparatively low; yet the icebergs detached from it are of the loftiest description. Here, on the spot, it does not seem incorrect to compare the icebergs to mere chippings off its edge, and the floe ice to the thinnest shavings. The far-off outline of the glacier, seen against the eastern sky, has a faint tinge of yellow. It is almost horizontal, and of unknown distance and elevation. There is an unusual dearth of birds and seals. Everything around us is painfully still, excepting when an occasional iceberg splits off from the parent glacier; then we hear a rumbling crash like distant thunder, and the wave occasioned by the launch reaches us in six or seven minutes, and makes the ship roll lazily for a similar period. I cannot imagine that within the whole compass of nature's varied aspects there is represented to the human eye a scene so well adapted for promoting deep and serious reflection, for lifting the thoughts from trivial things of every-day life to others of the highest import."

Perpetual sunshine.

At this time the Fox sailed in a blaze of perpetual sunshine. Midnight differed from mid-day only in this—that the sun skimmed along the horizon instead of across the zenith. A seaman's chest was picked up here. It contained only a spoon, a fork, and some tin canisters.

On the 17th they pushed into the ice, but thick fog came on, and a gale of wind closed up the floes, thus cutting off retreat and precluding advance. From this time forward, until they were fairly beset, their voyage was a tough battle with the ice, in which they succeeded in making only a few miles—sometimes a few yards—at a time. Every effort was made to force a passage. The saws and blasting-powder were resorted to, but without success; and at length it became evident to the anxious commander of the expedition that they were doomed to spend the winter in the pack.

Battling with the ice.

During their struggles in the ice Christian, the Esquimaux, became a successful hunter of seals, and secured so many that the dogs fared sumptuously. "Forty-three seals," writes M'Clintock, "have been secured for the dogs; one dog is missing, the remaining twenty-nine devoured their two days' allowance of seal's flesh (sixty or sixty-five pounds) in forty-two seconds! It contained no bone, and had been cut up into small pieces, and spread out upon the snow, before they were permitted to rush to dinner. In this way the weak enjoy a fair chance, and there is no time for fighting."

Seal hunting, and dog feeding.

About the 18th of September the Fox was completely frozen in. Nevertheless, although all their plans had been thus prematurely blasted, and they were doomed to spend a long winter of absolute inutility and in comparative peril and privation, the commander and his men faced their difficulties cheerfully, and prepartions for wintering and sledge travelling were carried on with unflagging energy. On the 24th two bears were seen and chase was given, but without success. Games upon the ice and skating, with occasional seal-shooting excursions, served to fill up leisure time. Among other sources of amusement they had a beautiful hand-organ on board. It had been presented by Prince Albert to the searching vessel bearing his name, which was sent out by Lady Franklin in 1851, and was now about to pass its third winter in the Arctic regions. Its effect on Christian was amusing and interesting. Of

Frozen in for the winter in Baffin's Bay.

CHAP. XV.

course he had never seen such an instrument before, and he regarded it with such awe and admiration, and seemed so entranced as he turned the handle, that his shipmates felt quite envious!

Ship housed over.

As there was now no hope of release, the ship was housed over and banked up with snow all round; but although she was thus stationary in the pack, the little Fox was by no means at rest,—the ice was carried steadily and slowly to the southward. With reference to the ice round them, however, all remained hard and fast. Rambles over the floes were now of daily occurrence, both for the sake of killing seals and bears, and the keeping up of health. Furious gales frequently swept over their wooden home; but they had warm cabins and heeded them not. A school was set on foot under the auspices of Dr. Walker, and was immediately filled with zealous students of "reading, 'riting, and 'rithmetic," from the forecastle.

School started.

Some experiments were also made to determine the mean hourly change of oscillation of a pendulum due to the earth's diurnal motion; but as the pendulum was only $11\frac{1}{2}$ feet in length, accuracy could not be obtained. The mean of several observations gave 17° 14′, whereas the change due to their latitude was about 14° 30′. A single experiment gave 14° 10′, and this was the longest in point of time of any of them, the pendulum having swung for thirty-six minutes. A little box perforated with small holes was fastened to the mast about fifty feet high, in which was placed a piece of prepared paper to detect the presence and amount of ozone in the air.

Scientific experiments.

As the winter advanced the days shortened until perpetual night settled down over the dreary sea. But the sailors were light-hearted and sanguine, and their monotonous life was occasionally relieved by such exciting incidents as the following: "There was a sudden call 'to arms' to-night. Whether sleeping, prosing, or schooling, every one flew out upon the ice on the instant, as if the magazine or the boiler was on the point of explosion. The alarm of 'a bear close-to fighting with the dogs,' was the

A bear!

The bear fight and the victory.

cause. The luckless beast had approached to within twenty-five yards of the ship ere the quartermaster's eye detected his indistinct outline against the snow; so silently had he crept up that he was within ten yards of some of the dogs. A shout started them up, and they at once flew round the bear and embarrassed his retreat. In crossing some very thin ice he broke through, and there I found him surrounded by yelping dogs. Poor fellow! Hobson, Young, and Petersen, had each lodged a bullet in him; but these only seemed to increase his rage. He succeeded in getting out of the water, when, fearing harm to the numerous bystanders and dogs, or that he might escape, I fired, and luckily the bullet passed through his brain. He proved to be a full-grown male, seven feet three inches in length. As we all aided in the capture, it was decided that the skin should be offered to Lady Franklin.

Exciting nature of the hunt.

"For the few moments of its duration the chase and death was exciting. And how strange and novel the scene! A misty moon affording but scanty light; dark figures gliding singly about, not daring to approach each other, for the ice trembled under their feet; the enraged bear, the wolfish howlings of the dogs, and the bright flashes of the deadly rifles!"

On the evening of the 28th October there occurred an unwonted and alarming disruption of the ice not 200 yards from the vessel. The sound sometimes resembled the continued roar of distant surf; at other times it was loud and harsh, as if trains of heavy waggons with ungreased axles were slowly labouring along.

Departure of the sun.

The sun took his final leave for the winter on the 1st November, and thenceforth they dwelt in constant lamp-light inboard, and occasional star-aurora-moonlight outside; but oftentimes these latter were quenched in stormy clouds and whirling drifts of snow.

Arctic foxes white and blue, bears, and numbers of seals, kept about them nearly the whole winter, affording an abundant supply of food for the dogs and occasionally for the men. The dogs were not allowed to sleep on board.

CHAP. XV.

Little holes were excavated in the bank of snow round the ship, and in these icy kennels the hardy animals lived in comparative comfort—each having a hole to himself.

Death of Scott, the engine-driver.

Up to this time it had fared well with all on board the Fox, but in the beginning of December death visited the little community. Scott, the engine-driver, died in consequence of internal injuries occasioned by a fall. On the 4th of December a hole was cut through the ice to the water and the body was committed to the deep. The loss of this man was seriously felt, as there was only one other man on board who could work the engines, and afterwards, when the Fox was struggling with the ice, the surviving engineer was obliged to do duty as long as overtaxed nature would permit, and then the engines were stopped for a time while he snatched a few hours repose!

Drifting in the pack.

It is with difficulty that the mind can form any conception of the position of these voyagers. Unable to move from their icy bed, yet constantly drifting over miles and miles of ocean—uncertain as to the where or the when of their deliverance from the pack—exposed to the terrible dangers of disrupting ice, and surrounded by the depressing gloom of the long Arctic night.

The winter passed away at length, and returning day cheered their spirits and revived their hopes, which, however, to do the men justice, had scarcely ever sunk. But as deliverance drew near, danger increased tenfold. In the earlier part of winter we find M'Clintock writing thus:—

Dangers of the disrupting ice.

"*Nov* 16.—A renewal of ice-crushing within a few hundred yards of us. I can hear it in my bed. When the heavy masses come into collision with much impetus, it fully realizes the justness of Dr. Kane's descriptive epithet, 'ice-artillery.' Fortunately for us, our poor little Fox is well within the margin of a stout old floe; we are, therefore, undisturbed spectators of ice-conflicts, which would be irresistible to anything of human construction." We cannot forbear reflecting on the fate that would have overtaken the Fox had she not been within the margin of that *stout old floe*, to which she had been led by the

merest chance, or rather, by the merciful hand of God. CHAP. XV.
"Immediately about the ship," continues M'Clintock, "all is still, and, as far as appearances go, she is precisely as she would be in a secure harbour—housed all over, banked up with snow to her gunwales. In fact, her winter plumage is so complete that the masts alone are visible."

As spring advanced, however, they not only witnessed, but felt the power of the ice. In February the record runs thus: "Daylight reveals to us evidences of vast ice-movements having taken place during the dark months when we fancied all was still and quiet, and we now see how greatly we have been favoured, what innumerable chances of destruction we have unconsciously escaped. A few days ago the ice suddenly cracked within ten yards of the ship, and gave her such a smart shock that every one rushed on deck with astonishing alacrity. One of these sudden disruptions occurred between me and the ship when I was returning from the iceberg; the sun was just setting as I found myself cut off. Had I been upon the other side I would have loitered to enjoy a refreshing gaze upon this dark streak of water; but after a smart run of about a mile along its edge, and finding no place to cross, visions of a patrol on the floe for the long night of fifteen hours began to obtrude themselves! At length I reached a place where the jagged edges of the floes met, so crossed, and got safely on board."

Vast ice-movements.

M'Clintock cut off from the ship.

Again, in March:—"Last night the ice closed, shutting up our lane, but its opposite sides continued for several hours to move past each other, rubbing off all projections, crushing, and forcing out of water masses four feet thick. Although 120 yards distant, this pressure shook the ship and cracked the intervening ice." Soon after we find that a heavy gale burst on them from the S.E. which blew so furiously, and encircled them with snowdrift so dense, that they could neither hear nor see what was going on twenty yards off. At night the ship became suddenly detached from her winter bed, and heeled over to the storm, inducing them to believe that the whole pack had been broken up

Heavy gales and snow-drift.

CHAP. XV.

and was pressing against them. This was not the case; but when the storm abated they found that their guardian floe had been fearfully curtailed, and that ice of four and a half feet thick had in some places been crushed to atoms for a distance of about fifty yards. Soon after the floe yielded, and the Fox received a "nip," which inclined her to port, and lifted her stern about a foot, while occasional groanings within her sturdy little hull replied to the wild surgings of the ice without. The danger was so great that boats, provisions, sledges, knapsacks, &c., were got ready for a hasty departure should the ship go down. All this time seals were being constantly shot, and narwhals were frequently seen migrating northward. Bears were also numerous, as was evidenced by their tracks, but they seldom ventured near the ship except at night.

Fox is nipt by the ice.

Once more afloat.

In April the floe on which the Fox rested cracked across, and she was once more afloat; but the only thing that could be done was to warp her into a place of comparative security within a projecting point. Soon the floes all round began to break up under the influence of continued gales which raised a heavy swell. On the 24th M'Clintock writes,—"It is now ten o'clock; the long ocean swell already lifts its crest five feet above the hollow of the sea, causing its thick covering of icy fragments to dash against each other and against us with unpleasant violence. It is, however, very beautiful to look upon—the dear old familiar swell! it has long been a stranger to us, and is welcome in our solitude. A floe-piece near us, of 100 yards in diameter, was speedily cracked so as to resemble a sort of labyrinth, or, still more, a field-spider's web. In the course of half an hour the family resemblance was totally lost, they had so battered each other, and struggled out of their original regularity. The rolling sea can no longer be checked; 'the pack has taken upon itself the functions of an ocean,' as Dr. Kane graphically expresses it."

Breaking up of the pack.

Gradually the ice opened out, and the Fox, by aid of wind and steam, *bored* slowly, but steadily out of the pack, receiving and returning many a sounding thump that caused

her frame to shake, her bells to ring, and her crew to stagger. Towards the end of April 1858, they were mercifully delivered from their dangerous position, having drifted down Baffin's Bay and Davis Straits 1194 geographical, or 1385 statute miles, during their sojourn of 242 days in the packed ice.

Dangers among ice.

On being set free M'Clintock immediately sailed for the coast of Greenland, in order to refit and repair damages before recommencing the voyage northward.

Passing over that part of the voyage up Baffin's Bay, which was a repetition of that of the previous year, we resume our narrative at the point where the Fox escapes from the much dreaded "Middle Ice," and sails for Ponds Bay on the western shores of Baffin's Bay.

On the 14th of July 1858, they were becalmed off Cape Horsburgh, when shouts on shore were heard, and soon after three families of Esquimaux boarded them. Petersen's powers as interpreter were immediately put to the test, but no information regarding the missing ships was obtained. On the 26th they fell in with the Diana whaling steamer off Cape Walker, the Captain of which took charge of their letters for England, and, on the 27th, they arrived in Ponds Bay. Here again they met with natives, and a very close and prolonged inquiry was instituted, but no satisfactory information was obtained. These natives, we are told, had excellent memories for names and places. They remembered the visits of former navigators to that part of the coast, and described the positions of wrecks that had taken place long ago, and with the existence and position of most of which Captain M'Clintock was already well acquainted, but no wrecks of recent date were known to them.

Meet with Esquimaux.

While here the Fox had another narrow escape. The ice forced her almost ashore, and for two hours she was in imminent danger, and was only saved by ice-blasting and warping, by which she got clear of the drifting masses only *four minutes* before these were crushed up against the rocks.

Narrow escape.

Quitting Ponds Bay they now steered into Lancaster

CHAP. XV.

Sound, in which they experienced some severe weather. On the 11th August they anchored inside Cape Riley, and commenced embarking coals, &c., from the depôt left there by former expeditions. At Godhaven a marble tablet was found which had been sent out by Lady Franklin, in the American expedition of 1855, for the purpose of being erected at Beechy Island to the memory of Sir John Franklin and his unfortunate crews. The Americans had failed to accomplish their object, and Captain M'Clintock had now the melancholy satisfaction of setting the tablet up in its destined place,—on the raised flagged square in the the centre of which stands the cenotaph recording the names of those who perished in the Government expedition under Sir E. Belcher. Near the same spot there is also a tablet erected to the memory of the gallant Lieutenant Bellot.

Marble tablet to memory of Franklin.

These objects completed, they once more set sail on the 16th of August. And now the interesting part of their voyage began. Hitherto, for many months, they had been engaged in an almost desperate struggle to reach the ground they wished to search. That ground was at length gained, and henceforth they were to proceed with the prospect, at any hour, of discovering the remains of the Erebus and Terror. At first it seemed as if the ice had relented, and was resolved to obstruct them no more, for they had a rapid and almost uninterrupted run down a considerable part of Peel Strait; but on the 18th their rising hopes were crushed, by the sight of an unbroken barrier of solid ice, extending across it from shore to shore. M'Clintock saw at a glance that there was no chance of its breaking up soon, so he immediately put about, and passing round the north of North Somerset, ran down Prince Regent's Inlet, intending to attempt to reach the southern waters of Peel Strait by way of Bellot Strait, which had been discovered by Mr. Kennedy, during his adventurous voyage in the Prince Albert in 1851. On the way they anchored at Port Leopold, to examine the state of the steam-launch, provisions, and stores, left there in 1849, as adverse circumstances might oblige them to fall

Fox runs down Peel Strait.

back upon it as a point of support. On the 21st they approached Brentford Bay, and anchored in a convenient bay near to Possession Point. As a depôt of provisions was landed here, it was temporarily named *Depôt Bay*.

Bellot Strait reached.

They had now reached Bellot Strait, and, entering upon its unknown waters, forced the ship eight miles to the westward—about half way through it—when they were checked by five or six miles of close, heavy pack-ice. As a clear channel was seen beyond, however, their hopes were not much disappointed, and it was confidently expected that the barrier would soon pass away. But dangers as usual beset them on every side.

Dangers in the Strait.

"At the turn of the tide," writes M'Clintock, "we perceived that we were being carried, together with the pack, back to the eastward; every moment our velocity was increased, and presently we were dismayed at seeing grounded ice near us, but were very quickly swept past it at the rate of nearly six miles an hour, though within 200 yards of the rocks, and of instant destruction! As soon as we possibly could, we got clear of the packed ice, and left it to be wildly hurled about by various whirlpools and rushes of the tide, until finally carried out into Brentford Bay. The ice-masses were large, and dashed violently against each other, and the rocks lay at some distance off the southern shore. We had a fortunate escape from such dangerous company."

Appearance of Bellot Strait.

The appearance of Bellot Strait is described as being very grand and rugged, about twenty miles long, and scarcely a mile wide in the narrowest part; within quarter of a mile of the north shore the depth was ascertained to be 400 feet. Some of the hill ranges rise to about 1600 feet above the sea, and the granitic cliffs were bold and precipitous. The tides in this strait were found to run through it with tremendous rapidity, and it was observed that the tide from the west was the stronger. The next few days were spent in fruitless efforts to penetrate the strait, in landing stores, &c., at Depôt Bay, and in searching for a more southerly passage. While thus engaged the captain took

CHAP. XV.

an opportunity to land and explore the interior of the country for a short distance.

Ramble into the interior.

"I enjoyed a delightfully refreshing ramble," he writes, "a mile or two inland, through a gently ascending valley, then two miles along the narrow margin of a pretty lake between mountains, beyond which lay a much larger one, four or five miles in diameter; this further lake was only partially divested of its winter ice. Here the scenery is not only grand, but beautiful. There was enough of vegetation to tint the craggy hillsides, and to make the sheltered hollows absolutely green. Deer-tracks and the foot-prints of wild fowl were everywhere numerous along the water-side. I saw two decayed skulls of musk oxen, and circles of stones, by the little lake, doubtless, at some remote period, the summer residence of wandering Esquimaux; hence I infer that fish abound in the lake, and that this valley is a favourite deer-pass. . . . . Yesterday Petersen shot an immense bearded seal. It sank, but floated up an hour afterwards. This animal measured eight feet long, and weighed about five hundred pounds. We prefer its flesh to that of the small seals, and its blubber will afford a valuable addition to our stock of lamp oil for the coming winter."

Tantalizing view of open sea.

It was very tantalizing to our discoverers to behold an open sea clear of ice as far as the eye could reach to the eastward, while, to the west, the direction in which they wished to go, little or no open water was visible. But, bitterly disappointed though they were, they hoped against hope. Again and again did they storm the ice battlements of this narrow pass, only to return vanquished to their fortress in Depôt Bay. That our language is not exaggerated, such a paragraph as the following shows:—

"Last evening's amusement was most exciting; nor was it without its peculiar perils. With cunning and activity worthy of her name, our little craft warily avoided a tilting match with the stout blue masses which whirled about, as if with wilful impetuosity, through the narrow channel. Some of them were so large as to ground in six or seven

fathoms water. Many were drawn into the eddies, and, acquiring considerable velocity in a contrary direction, snddenly broke bounds, charging out into the stream, and entering into mighty conflict with their fellows. After such a frolic the masses would revolve peacefully or unite with the pack, and await quietly their certain dissolution. May the day of that wished for dissolution be near at hand! Nothing but strong hope of success induces me to encounter such dangerous opposition. I not only hoped, but almost felt, that we deserved to succeed."

Conflict of ice-masses.

Two plans now occupied the mind of M'Clintock. One was to find some series of valleys, or chain of lakes, or continuous lowland, to the coast of Peel Strait, along which sledge loads of provisions might be dragged in autumn and deposited at intervals along the route of search, which he intended to follow up with sledges in spring,—for it was now becoming evident that they were doomed to pass the winter at the eastern end of Bellot Strait. The other plan was to land a small depôt of provisions sixty or seventy miles to the southward, and down Prince Regent's Inlet, in order to facilitate communication with the Esquimaux, either that autumn or early the following spring. Both of these plans were afterwards successfully carried out. Meanwhile strenuous but unavailing efforts to pass through the strait, both by ship and boat, were continued up to the close of the season. The Fox did, indeed, succeed in penetrating to its western extremity, but here the solid pack, stretching far and wide over Peel Strait, arrested their progress, and finally convinced them that sledge journeying in spring was their only hope of accomplishing the main object of the voyage.

Plans of search.

During one of the excursions made to the neighbouring hill tops, a long level lake was discovered, occupying a valley which lies between a small inlet near Cape Bird and Hazard Inlet. This was a fortunate discovery, as it would afford a good level road to the west, through a country so rugged that grave doubts had been forced upon the captain as to the practicability of sledge travelling over it at all. As

Large lake discovered.

CHAP. XV.

to Bellot Strait, from the continual breaking up of its ice by the tide, there was little prospect of its being passable in winter.

Approach of winter.

Preparations for spending the winter were now heartily commenced. September had set in, the days were shortening, the thermometer was falling, and the approach of the reign of ice became evident. Hunting became the order of the day. The sailors were supplied with muskets and ammunition, and the country was scoured in quest of game. But birds and other animals were becoming scarce. Three seals were shot one day, and a bear seen; on another, only two hares, an ermine, and an owl were observed, but not shot. Some peregrine falcons were bagged, however, which Petersen declared were "the best beef in the country, and that the young birds were tender and white as chicken." Among other incidents of minor importance, a mouse was discovered alive in a cask of biscuit. This cask was a strong, water-tight one, had been packed on shore at Aberdeen in June 1857, and remained ever since unopened. As there was no hole in it by which the mouse could get in or out, it was evident that it had subsisted all that time on confined air and dry biscuit!

Fox runs into winter quarters.

Up to the latest hour the ship was held in readiness to prosecute the voyage should the ice at the western extremity of Bellot Strait open up; but at length severe frost set in, snow fell in abundance, and after a last desperate effort to get through, they ran back to their winter harbour, which was now named Port Kennedy, after the discoverer of the strait. They had delayed almost too long. On the 28th of September M'Clintock writes: "It was only yesterday that we left the western ice, and in consequence of the vast accumulation of young ice in Bellot Strait, we had considerable difficulty in reaching the entrance of Port Kennedy. All within was so firmly frozen over, that after three hours' steaming and working we only penetrated a hundred yards; however, we are in an excellent position, although our wintering place will be further out by a quarter of a mile than I intended."

Preparations for wintering in Port Kennedy.

The business of winter-quarters was now commenced in earnest,—unbending sails, unshipping and landing stores, housing over and banking up with snow, building observatories with blocks of ice, and shooting deer and seals, occupied their minds fully for a considerable time; but at length the novelty of all this wore off, the perpetual night of winter settled down on them, and their chief efforts were directed to warding off the gloom and *ennui* of an Arctic winter. Their vicinity to Bellot Strait proved in one respect to be most unfortunate. Owing to the strength of the tide before referred to, parts of it were kept open during the whole winter, and the black vapours arising from the holes proved to be a constant source of annoyance. Moreover, the strait itself seemed as a sort of funnel for the biting winds of these regions to howl through, and, no matter what the state of the weather in other parts of the country, there were almost continual storms revelling around Port Kennedy, which confined the crew of the Fox, much more than would otherwise have been the case, to their cabins. In spite of this, however, they managed to live in tolerably good health and spirits, and kept up their various meteorological and scientific observations with the utmost regularity. Depôt parties were also despatched at various times, and caches of provisions made along the routes of the intended spring search.

Three expeditions planned.

Three separate expeditions were planned and eventually carried out. Each party was to consist of a leader and five men, with a dog sledge,—M'Clintock, Hobson, and Young, being the leaders.

The first party, under M'Clintock, was to proceed to the Great Fish River, examining the shores of King William's Land in going and returning.

The second party, under Hobson, was to explore the western coast of Boothia as far as the magnetic pole, during the early part of the current winter, and from Gateshead Island westward, next spring.

The third party, under Young, was to trace the shores of Prince of Wales Land from Lieutenant Browne's furthest

CHAP. XV.

to the south-westward, to Osborn's furthest, and, if possible, to examine between Four River Point and Cape Bird.

Two months' provisions were to be taken by each party, and about the middle of March was fixed for setting out.

Dulness of winter.

Meanwhile the winter dragged heavily on. We find the following entry in the journal, of date 2d November: "Very dull times. No amount of ingenuity could make a diary worth the paper it is written on. An occasional raven flies past; a couple more ptarmigan have been shot; another N.W. gale is blowing, with temperature down to 12°."

Narrow escape of depôt party under Hobson.

And again, in reference to a depôt party that had gone off under Hobson: "*Saturday night.* The N.W. gale blew without intermission for seventy hours, the temperature being about 15°; we hoped that our absent shipmates might be housed safely in snow huts. This afternoon all doubts respecting them were dispelled by their arrival in good health, but they evidently have suffered from cold and exposure during their absence of nineteen days. For the first six days they journeyed outward successfully; on that night they encamped upon the ice. It was at spring tide; a N.E. gale sprung up, and blowing off shore, detached the ice, and drifted them off! . . . . As soon as they discovered that the ice was drifting off shore with them, they packed their sledges, harnessed the dogs, and passed the night in anxious watching for some chance to escape. When the ice got a little distance off shore, it broke up under the influence of the wind and sea, until the piece they were upon was scarce 20 yards in diameter. This drifted across the mouth of a wide inlet until brought up against the opposite shore. The gale was quickly followed by an intense frost, which, in a single night formed ice sufficiently strong to bear them in safety to the land, although it bent fearfully beneath their weight."

Death of Brand.

A second time death visited this band of sorely tried voyagers. During the winter, Mr. Brand, the engineer, was found dead in his berth. It is supposed that the cause was apoplexy. His remains were interred on shore, and a

headboard with an inscription was placed over them. There was now no one left on board who understood, or could manage the machinery of the steam-engine.

Preliminary searching expeditions set out.

Two of the preliminary searching expeditions set out on their travels on the 17th of February. They were led by M'Clintock and Young. "Our equipment," writes the former, consisted of a very small brown Holland tent, Macintosh floor cloth, and felt robes; besides this, each man had a bag of double blanketing, and a pair of fur boots to sleep in. We wore mocassins over the pieces of blanket in which our feet were wrapped up, and, with the exception of a change of this foot-gear, carried no spare clothes."

Esquimaux met with at the magnetic pole.

On the 1st of March M'Clintock's party encamped about the neighbourhood of the magnetic pole, and here they met with Esquimaux, one of whom had a naval button on his coat, which, they said, *had been obtained from some white people who were starved upon an island where there are salmon.* This was the first indication of the Franklin expedition they obtained. Next day they accompanied the Esquimaux to their village, and here many more relics of the lost ships were obtained, and some information gained.

The relics purchased from them were as follows:—six silver spoons and forks; a silver medal, the property of Mr. A. M'Donald, assistant surgeon; part of a gold chain; several buttons, and knives made of the iron and wood of the wreck; also bows and arrows constructed of materials obtained from the same source. One of their sledges was made of two stout pieces of wood, which might have been a boat's keel.

Information regarding wrecks, &c.

The information obtained was to the effect that a ship having three masts had been crushed by the ice out in the sea to the west of King William's Island, and sank, but that all the people had landed safely. That the white men had travelled towards Montreal Island, where they had perished, and that none of themselves had seen the whites, but that one of them had seen their bones on the island where they died. The information thus obtained bore out the principal statements of Dr. Rae, and also

CHAP. XV.

accounted for the disappearance of one of the ships, but left the fate of the other still uncertain.

M'Clintock's party return.

Their provisions being now expended, M'Clintock and his party turned to retrace their steps, and reached the Fox on the 14th March 1859, having been absent twenty-five days, during which they travelled 420 English miles, and completed the discovery of the coast-line of continental America, thereby adding 120 geographical miles to our charts. The mean temperature throughout the journey was 30° below zero of Fahrenheit.

Captain Allen Young's depôt party.

Captain Allen Young and his party had arrived before them, on the 3d March, having met with nothing worthy of particular notice. They placed their depôt, however, on the shore of Prince of Wales Land, about seventy miles S.W. of the ship. Young seems to have been fond of rough travel, for on the 18th of the same month we find him, during a N.W. gale heading another party consisting of two men and eighteen dogs, which were despatched to Fury Beach depôt for the purpose of procuring three casks of sugar, a deficiency to that extent of that indispensable article of food having been ascertained to exist in the stores of the Fox. Dr. Walker, also, was a zealous sledge traveller.

Provisions brought from Fury Beach.

Young's party returned with eight cwt. of sugar on the 25th. Their labours had been very severe. The ice was so rough that sledge travelling was almost impossible. One sledge broke down, and all the sugar had to be piled upon the other, the consequence of which was that it would only run freely on smooth ice, and directly any hummocks were encountered, the dogs, with their usual instinct not to drag a sledge unless it runs freely, would lie down and oblige Captain Young and his two men to unload, and carry the packages over the obstacles on their backs. After this, Young and one of his men became snow-blind, and the third man had to lead, load, and unload them, when these portages occurred.

On the 2d of April the extended searching expeditions set forth. Captain M'Clintock and Lieutenant Hobson

travelled in company as far as Cape Victoria, where they separated; the former proceeded southward down the east coast of King William's Land; the latter marched direct for Cape Felix, intending to travel down its western shores. Proceeding southward, along his old track, M'Clintock extended his journey onward to Montreal Island. He completed the exploration and circuit of King William's Land, passed on foot through the only feasible North-West Passage in that direction, and obtained additional information and relics of the Franklin expedition. The Esquimaux with whom they fell in corroborated the information formerly obtained. They said that two ships had been seen by the natives of King William's Island. "One of them," writes M'Clintock, "was seen to sink in deep water, and nothing was obtained from her, a circumstance at which they expressed much regret; but the other was forced on shore by the ice, where they suppose she still remains, but is much broken. From this ship they have obtained most of their wood, &c., and Oot-loo-lik is the name of the place where she grounded." It was also said that the body of a man was found on board the ship; that he must have been a very large man, and had long teeth. Little now remained of the wreck, they said, and she was without masts. There had been *many books*, but the weather had destroyed them long ago. An old woman and a boy were pointed out as having been the last to visit the wreck, in 1857–58. From this old woman they learned that many of the white men had dropped by the way as they went to the Great River; that some were buried, and some were not. M'Clintock could not, however, arrive at any approximation to the numbers of the white men, nor to the years that had elapsed since they had perished. Relics of the wreck were found in the possession of the Esquimaux all along the route. Montreal Island was searched, but the only relics found were a piece of a preserved meat tin, two pieces of iron hoop, some scraps of copper, and an iron hoop bolt. No record of any kind was discovered. The

Extended searching expeditions set out.

Information gleaned from the Esquimaux.

Relics found.

CHAP. XV.

ground at the time being covered with snow rendered a search almost useless. We cannot help expressing surprise, however, that no effort was made to discover the *cache* made by Dr. King on that island many years before. This cache was known to exist by Franklin, and doubtless must frequently have been referred to by him in the presence of his officers, who, there is every reason to suppose, would have sought it out and placed some record in it during the period of their sojourn on and in the neighbourhood of Montreal Island. Captain M'Clintock does not even refer to this cache, leading us to suppose that he had never heard of its existence.

Dr. King's cache.

Point Ogle examined.

From Montreal Island they began the return journey, and in doing so passed Point Ogle Peninsula, which they examined with care; and it will here be observed that M'Clintock, having joined the track of Dease and Simpson from the westward, proved the existence of a North-West Passage in *that* direction. The party were now, however, on the point of discovering that sad record which, while it told of the death of Sir John Franklin, also showed that his party had actually been the *first* to traverse the last link of that celebrated passage.

"We were now," says M'Clintock, "upon the shore along which the retreating crews must have marched. My sledges, of course, travelled upon the sea ice close along the shore; and, although the depth of snow which covered the beach deprived us of almost every hope, yet we kept a very sharp-look out for traces, nor were we unsuccessful. Shortly after midnight of the 25th May, when slowly walking along a gravel ridge near the beach, which the wind kept partially bare of snow, I came upon a human skeleton, partly exposed, with here and there a few fragments of clothing appearing through the snow. The skeleton,—now perfectly bleached,—was lying upon its face, the limbs and smaller bones either dissevered or gnawed away by small animals.

Skeleton of one of the Franklin expedition discovered.

"A most careful examination of the spot was of course made, the snow removed, and every scrap of cloth gathered

up. A pocket-book afforded strong grounds for hope that some information might be subsequently obtained respecting the unfortunate owner and the calamitous march of the lost crews, but at the time it was frozen hard. The substance of that which we gleaned upon the spot may thus be summed up:—

Substance of the information gathered.

"This victim was a young man, slightly built, and perhaps above the common height; the dress appeared to be that of a steward or officer's servant, the loose bow-knot in which his neck handkerchief was tied not being used by seamen or officers. In every particular the dress confirmed our conjectures as to his rank or office in the late expedition,—the blue jacket with slashed sleeves and braided edging, and the pilot-cloth great-coat with plain covered buttons. We found, also, a clothes brush near, and a horn pocket-comb. This poor man seems to have selected the bare ridge top, as affording the least tiresome walking, and to have fallen upon his face in the position in which we found him. It was a melancholy truth the old woman spoke when she said, 'They fell down and died as they walked along.'"

Cape Herschel cairn.

M'Clintock had strong hope of finding some record in the cairn which was known to have been erected at Cape Herschel, but was disappointed in this. About twelve miles beyond the cape, however, a small cairn was found. It had been built by Lieutenant Hobson's party, who had passed the spot six days previously, without having seen anything of the wreck or of natives. But Hobson had found a *record* for which the gallant crew of the Fox had sought so diligently,—*a record of the Franklin expedition.* He found it at Point Victory on the N.W. coast of King William's Land. This paper contained the brief and touching story of the Franklin expedition up to the desertion of the ships in 1848. It was one of the printed forms usually supplied to discovery ships for the purpose of being enclosed in bottles and thrown overboard at sea, with a printed note in six different languages requesting any one who should find it to forward it to the Secretary of the Admiralty.

Record discovered by Hobson.

CHAP. XV.

Here we transcribe M'Clintock's narrative:—

"Upon it," he says, "was written, apparently by Lieutenant Gore, as follows:—

The Record.

28th of May, 1847. { H. M. Ships Erebus and Terror wintered in the ice in lat. 70° 05′ N., long. 98° 23′ W.

Having wintered in 1846–47 at Beechy Island, in lat. 74° 43′ 28″ N., long. 91° 39′ 15″ W., after having ascended Wellington Channel to lat 77°, and returned by the west side of Cornwallis Island.

Sir John Franklin commanding the expedition.

All well.

Party consisting of two officers and six men left the ships on Monday 24th May, 1847.

(Signed) Gm. Gore, Lieutenant.
Chas. F. Des Vœux, Mate.

"There is an error in the above document,—namely, that the Erebus and Terror wintered at Beechy Island in 1846–47; the correct dates should have been 1845–46; a glance at the date at the top and bottom of the record proves this, but in all other respects the tale is told in as few words as possible of their wonderful success up to that date, May 1847.

Error in the dates.

Proceedings of the Franklin expedition after 1845.

"We find that, after the last intelligence of Sir John Franklin was received by us (bearing date of July 1845) from the whalers in Melville Bay, his expedition passed on to Lancaster Sound, and entered Wellington Channel, of which the southern entrance had been discovered by Sir Edward Parry in 1819. The Erebus and Terror sailed up that strait for 150 miles, and reached, in the autumn of 1845, the same latitude as was attained eight years subsequently by H. M. S. Assistance and Pioneer. . . . . Having accomplished this, they returned southward from latitude 77° north, which is at the head of Wellington Channel, and re-entered Barrow's Strait by a new channel between Bathurst and Cornwallis Island."

Thus, during his first season, Franklin accomplished more than almost any previous navigator; and when the ships went into winter quarters at Beechy Island in 1845–6, the results of their first year's labour must have

The Franklin expedition in 1846–7.

been most cheering. "These results were the exploration of Wellington and Queen's Channels, and the addition to our charts of extensive lands on either hand. In 1846 they proceeded to the south-west, and eventually reached within twelve miles of the north extreme of King William's Land, when their progress was arrested by the approaching winter of 1846–7. That winter seems to have passed without any serious loss of life; and when in the spring Lieutenant Gore leaves with a party for some especial purpose, and very probably to connect the unknown coast-line of King William's Land, between Point Victory and Cape Herschel, those on board the Erebus and Terror were 'all well,' and the gallant Franklin still commanded.

"But alas! round the margin of the paper, upon which Lieutenant Gore in 1847 wrote those words of hope and promise, another hand had subsequently written the following words:—

Marginal note on the record.

"'*April* 25, 1848.—H. M. Ships Terror and Erebus were deserted on the 22d April, 5 leagues N.N.W. of this, having been beset since 12th September 1846. The officers and crews, consisting of 105 souls, under the command of Captain F. R. M. Crozier, landed here in lat. 69° 37′ 42″ N., long. 98° 41′ W. Sir John Franklin died on the 11th June 1847; and the total loss by deaths in the expedition has been to this date, 9 officers and fifteen men.

(Signed) 'F. R. M. Crozier, 'Captain and Senior Officer, 'and start (on) to-morrow, 26th, for Back's Fish River.'

(Signed) 'James Fitzjames, 'Captain H. M. S. Erebus.

"This marginal information was evidently written by Captain Fitzjames, excepting only the note stating when and where they were going, which was added by Captain Crozier.

Additional information.

"There is some additional marginal information relative to the transfer of the document to its present position (namely, the site of Sir James Ross's pillar), from a spot four miles to the northward, near Point Victory, where it had been originally deposited by the *late* Commander Gore. This little word *late* shows us that he, too, within the twelvemonth, had passed away.

CHAP. XV.

Remarks on the fate of the Franklin expedition.

"In the short space of twelve months how mournful had become the history of Franklin's expedition; how changed from the cheerful 'all well' of Graham Gore! The spring of 1847 found them within ninety miles of the known sea off the coast of America; and to men who had already in two seasons sailed over 500 miles of previously unexplored waters, how confident must they have felt that that forthcoming navigable season of 1847 would see their ships pass over so short an intervening space! It was ruled otherwise. Within a month after Lieutenant Gore placed the record on Point Victory, the much loved leader of the expedition, Sir John Franklin, was dead; and the following spring found Captain Crozier, upon whom the command had devolved, at King William's Land, endeavouring to save his starving men, 105 souls in all, from a terrible death, by retreating to the Hudson Bay territory up the Back, or Great Fish River."

Forlorn hope.

Those who have read the account of Franklin's previous travels through the desolate part of the territory referred to, will be able to form some faint idea of how desperate a forlorn-hope these gallant men attempted, and they will not be surprised that they perished in the attempt.

Hobson's note conveying this information to M'Clintock also told him that quantities of clothing, and articles of all kinds, were lying about the cairn, as if the crews had been aware that they were retreating for their lives, and had abandoned everything they considered superfluous.

M'Clintock now pushed forward with redoubled ardour, in the hope of discovering the wreck which Hobson had missed, owing, he thought, to the bad weather he had experienced. M'Clintock was now following Hobson's track along the western coast of King William's Island, the extreme west point of which he named after Captain Crozier. From Cape Crozier the coast turned sharply to the eastward. On the 30th May another sad relic was found,—a boat which had belonged to the Franklin expedition,—and in it was found a note from Hobson, stating that

Boat discovered by M'Clintock.

he had been there, and had examined the boat, but without discovering record, journal, pocket-book, or memorandum of any description.

Lieutenant Hobson discovers the cairn near Cape Felix.

Having now followed M'Clintock thus far on his homeward journey, we will turn back to Lieutenant Hobson's expedition, and trace it to the same point. Having parted from M'Clintock at Cape Victoria, he crossed to Cape Felix, near to which he discovered a cairn. Quantities of clothes and blankets were found here. Continuing along shore, he discovered a large cairn on the 6th of May, inside of which he found the melancholy record already mentioned. Much clothing, &c., was found here, also a sextant, on which was engraved the name of Frederick Hornby. Near Cape Crozier he found the boat (before referred to) by a small iron stanchion which was just visible above the snow. The boat was immediately cleared out, and two human skeletons were found lying at the bottom of it, one of these under a heap of clothing. There were also watches, chronometers, silver spoons, money, a number of Bibles, Prayer-books, and other religious books, and a copy of the 'Vicar of Wakefield,' but not a single line of writing to throw light on the intended proceedings of the retreating crews. Two guns rested on the side of the boat, one barrel of each being loaded and cocked. The boat had evidently been equipped with the greatest care for the ascent of the Great Fish River. Paddles supplied the place of oars and rudder. A sloping canvas roof formed part of the equipment. There were fifty fathoms of deep sea sounding line, and an ice-grapnel near her. The boat was mounted on an oak sledge of unusual weight and strength.

Skeletons and relics found in the boat.

Relics, &c., found in the boat.

Among other portions of clothing, &c., there were seven or eight pairs of boots,—cloth winter boots, sea-boots, heavy ankle-boots, and strong shoes; silk handkerchiefs, black and white; figured towels, soap, sponge, tooth-brush, and hair combs; besides which were found a large quantity of small stores; but the only provisions that could be found were a little tea and chocolate, and a small portion of

CHAP. XV.

tobacco. The position of the boat was about fifty miles from Point Victory, seventy miles from the skeleton found near Cape Herschel, and 150 miles from Montreal Island. As the boat's head was turned in a N.E. direction, M'Clintock concludes that the exhausted crews having found it too heavy to drag were on their return to the ships, and that the two men found in it had been unwell, and were left by their comrades with a supply of provisions to last until they could rejoin them. As the wreck was not discovered, it is supposed either that it is lying on some of the numerous islands to the westward of King William Island, or that it has been run over by the ice. Another record was found by Hobson, which had been deposited by Lieutenant Gore, on the south side of Back Bay in 1847, but it contained no additional information.

Probable fate of the ships.

This, then, is probably the last that we shall ever learn regarding the ill-fated expedition of Sir John Franklin. The fate of our brave countrymen is now known, although the minute details of their sufferings have been, perhaps mercifully, witheld. The venerable hero of Arctic discovery sleeps in his icy tomb, unmindful now of those biting frosts and howling northern winds, against which he battled so long, so often, and so valiantly, for the good of science and the honour of his country's name. No marble monuments of purest white could mark the scattered graves of our lost countrymen, half so appropriately as the mighty bergs that shall surround them henceforward in these dark regions of everlasting ice and snow.

Hobson returns to the Fox.

After carefully examining the boats and relics, Lieutenant Hobson examined the coast beyond Cape Crozier, and returned to the Fox on the 14th of June. He was in a very exhausted state, having suffered from scurvy so severely during the whole journey, that he had been for many days upon his sledge, and had to be carried in and out of his tent by his gallant comrades. Five days afterwards Captain M'Clintock arrived, having been absent eighty days, in course of which he had surveyed the

coast from Bellot Strait to the Magnetic Pole; travelled completely round King William Island and filled up its unknown coasts, besides making valuable observations with a dip circle which he carried with him. He found that another of his little band had fallen before the King of Terrors. The steward of the Fox had died of scurvy a few days previously, and was buried beside his shipmate Brand.

M'Clintock's discoveries.

Death of the steward.

The third expedition under Captain Young had not returned, and as some anxiety was felt as to the cause of such a prolonged absence, M'Clintock went off in search of him. His party was found in a very exhausted state travelling slowly towards the ship. Young had commenced his spring exploration on the 7th of April with a sledge party of five men, four of whom he sent back, however, and continued his travels with only *one man* for forty days, encamping in such snow huts each night as they were able to build; and this, too, although he was in so bad a state of health that the doctor had entered a written protest against his leaving the ship!

On this hazardous journey Young had crossed Victoria (now Franklin) Straits, discovered M'Clintock Channel, coasted along Prince of Wales Land to the north-westward, and proved it to be an island by travelling to the point reached by Captain Sherard Osborn from the north. He then returned to the ship, and again setting out, re-crossed Franklin Strait to complete the search to the northward upon Prince of Wales Land, and the unknown land of North Somerset. It need scarcely be added that he met with no trace of the Franklin expedition.

Captain Young's expedition and discoveries.

The object of the voyage having now been accomplished, the crew of the "Fox" henceforward spent their time in recruiting their exhausted energies, in shooting such game as came near them, and in making preparation for their voyage home. The captain, among other duties, undertook to work the engines, which had been left by the deaths of Scott and Brand without any one who understood how to control them. About the middle of July there was open

CHAP. XV.

water in Bellot Straits, but Prince Regent Inlet was still fast, and continued in this condition so long, that the anxious discoverers began to entertain fears that they should not escape. But the Almighty, who had guided them hitherto in safety through so many dangers, mercifully willed it otherwise. A gale arose on the 7th of August, and broke up the ice. On the 9th, steam was got up, and, bidding adieu to the harbour in which they had spent eleven months, they pushed out into the pack. On the following day the north side of Creswell Bay was reached, and here they were nearly crushed between the ice and the land, but by hanging on to a grounded mass of ice they escaped. From this time they met with little obstruction in their homeward voyage, and on the 20th of September 1859, the Fox arrived in England.

Return of the Fox to England.

* * * * *

Before closing this brief account of the last Arctic expedition, we think it right to make a few remarks in reference to the closing words of M'Clintock's interesting narrative, in which he states that Franklin's party, before they perished, "*achieved the grand object of their voyage, —the Discovery of the North-West Passage.*" Those who are acquainted with the conformation of the Polar regions, know that a vast *archipelago* stretches from the northern shore of North America towards the pole, and that it has been amongst those islands the ships of the civilized world —especially those of England—have been battling for centuries past, to discover the north-west passage from the Atlantic to the Pacific Ocean.

Remarks on the discovery of the North-West Passage.

Captain M'Clure, of the Investigator, was the first (in 1854) to convey to this country the intelligence that such a passage really existed round the north of Bank's Land. Long prior to this voyage of M'Clure, the northern coast of America had been surveyed by various travellers (among whom was Sir John Franklin himself) from Behring Straits eastward to Simpson's furthest, near the peninsula of Boothia. From Behring Straits to Point Barrow was surveyed by Mr. Elson in the barge of the Blossom, which

Remarks on the discovery of the North West Passage.

went out to co-operate with Franklin's land expedition in 1826, which, at the same time, surveyed the coast from the north of the Mackenzie River to Point Turnagain. Messrs. Dease and Simpson connected the survey of the coast between Points Turnagain and Barrow in 1837, and in the summers of 1838–39 they continued their survey eastward to Castor and Pollux River. From this point eastward the peninsula of Boothia extended, as has been proved by Dr. Rae, who, in 1854, traversed the isthmus from Repulse Bay, connected his discoveries with those of Dease and Simpson, and proved that the north-west passage did not lie in this direction. It remained, therefore, to be ascertained whether the sea did not extend in an unbroken line northward round the shores of Boothia and North Somerset. Former navigators, entering those seas from the *east* by Barrow Strait, had traced the shores of North Somerset a considerable distance to the south. Various travellers, as we have shown, had traced the shores of the Arctic Sea from Behring's Straits on the *west*, and Rae pushed on the discovery in this direction a considerable distance along the western shore of Boothia. There was, therefore, only a small portion of unexplored region between these two points lying to the northward of King William Land. *This portion* we now know to be the ocean, and, from the record brought home by M'Clintock, we learn *that it was traversed on foot by the Franklin expedition in* 1848,—four years before M'Clure discovered *his* channel of the north-west passage.

In commenting on this subject, some writers have somewhat unnecessarily stood up in defence of M'Clure's discovery. They seem to forget that the great problem to be solved was, not the *practicability*, but, the *existence* of a north-west passage. We have already shown that its existence was discovered by the Franklin expedition in 1848, while M'Clure made his discovery in 1852. We readily grant that M'Clure and his party were the first who actually traversed the north-west passage, entering at Behring's Straits and emerging into the Atlantic. But

CHAP. XV.

M'Clure and Franklin.

it must be remembered that M'Clure's ship still lies in the Bay of Mercy. He and his party completed the passage *on foot* over the ice. If the honour of having discovered the north-west passage is due only to him who sails from the Atlantic to the Pacific Ocean, round the northern coast of America, then *no one* has discovered it. Captain, now Sir R. M'Clure, discovered its existence in 1852, and in addition to this, *accomplished it*, with his gallant men, on foot. Sir John Franklin's heroes, all unknown to the world, discovered the north-west passage in 1848, and, having fulfilled the object of their voyage, they died on the scene of their triumph.

Remarks on the practicability of the passage.

In reference to the practicability of any particular passage, opinion and experience lose much of their weight when we find that the opinion and experience of one year are flatly and practically contradicted by another. Lieutenant Browne (of the Austin and Ommaney expedition) explored the western coast of Peel's Sound to lat. 72° 49′ N., long. 96° 40′ W., and pronounced it as his opinion that it was mostly frozen solid to the bottom, and therefore rarely, if ever, open to navigation. Yet there is the strongest reason for believing that Sir John Franklin's two ships sailed *right through*, and far beyond this channel in the year 1846.

As the sad fate of the gallant Franklin has been ascertained, and the north-west passage has been discovered, we might have supposed that these realms of ice would henceforth be left to the bears and the Esquimaux. But man's ambition is not easily satisfied. We learn from a transatlantic paper that—"Another Arctic expedition is preparing to start next spring. Dr. I. I. Hayes, the surgeon of the Kane expedition, will be at the head of it, and it will be entirely sustained by the scientific associations of the United States, which have entered into it with great interest. The leading object will be to complete the explorations commenced by Dr. Kane, and settle the question of the open Polar Sea, and the other scientific problems connected with it. As there is no reason for

New expedition projected by the Americans.

following the course of former explorations again, Dr. Hayes proposes to push rapidly up the Kennedy Channel, and directly on towards the pole with as little delay as possible.

It is probable, therefore, that we have not yet written the last chapter of "*Polar Seas and Regions.*"

CHAPTER XII.

The Northern Whale-Fishery.

Objects of the Whale-fishery—Early practised on the Coasts of Europe—First Fishing-voyages to the Arctic Sea—Disputes between the different Nations—Accommodation effected—Dutch Fishery—English Fishery; Its slow Progress and ultimate Success—Various Attempts to form Fishing Settlements on the Arctic Shores—Mode of conducting the Fishery—Equipment—Voyage—Attack and Capture of the Whale—Operation of Flensing, &c.—Situations in which the Fishery is carried on; Its Dangers—Various Shipwrecks and Accidents—Recent Changes in the Fishing-stations; Increased Dangers—Capital invested in the Trade; Its Produce; Ports whence it is carried on—Disasters and Shipwrecks of 1830; Adventures on the Ice; Extrication of the remaining Vessels; General Results—Abstract of the Whale-fishings from 1815 to 1834 inclusive—Statement from 1835 to 1842—Details for 1843 and 1844.

CHAP. XVI. Arctic life

We have frequently had occasion to notice the great number and stupendous magnitude of those animal forms with which nature has filled the abysses of the Arctic Ocean. The cetaceous orders, which, in some respects, belong exclusively to those northern depths, would for ever have remained undisturbed in the vast domain which Providence has assigned to them, had not the spirit of avarice commenced a deadly warfare. Man, ever searching for objects which may contribute to his accommodation, discovered, in those huge animals, a variety of substances fitted for the supply of his wants. Even after his more refined taste rejected their flesh as food, the oil was re-

The cetaceous orders

quired to trim the winter lamp, and to be employed in various branches of manufacture; while the bone, from its firm, flexible, and elastic quality, is peculiarly fitted for various articles of dress and ornament.

Whale oil.

Antiquity of the whale fishery.

It has been generally supposed that whale-fishing, as a commercial pursuit, arose subsequently to the revival of navigation in Europe; but the researches of Mr Scoresby leave no doubt that, on a small scale at least, it existed at a much earlier period. Even the voyage of Ohthere, in 890, shows that its operations were already carried on with some activity on the coast of Norway: indeed, it was natural that, in this native region of the *cetacea*, their capture should commence sooner than elsewhere, and at an era probably ascending far beyond human records. Still this was not the true whale,—an animal which never leaves its haunts within the Arctic zone. It was that species of dolphin called bottle-nose, which alone reaches the northern extremities of Europe; is occasionally stranded on the coasts of Orkney and Shetland; and at times penetrates much farther south.

Whale fishery of the Northmen.

The Northmen, in their career of conquest and settlement, introduced on the coast of France the hunting of the whale, which, to these hardy mariners, was at once a trade and a sport,—having found in the southern seas an inferior species, attracted thither by the shoals of herrings on which it feeds. These smaller fish frequent the Bay of Biscay, to which they seem to make a periodical migration, and where they are arrested by the wide circuit of its shores. Ancient documents prove that the Normans, the Flemings, and even the English, regarded them as a valuable commodity; less, however, for the oil, which in this species is not very abundant, than for the flesh, which satisfied the hunger and even pleased the palate of our rude ancestors. Whales' tongues are ranked among the delicacies that adorned the table during the middle ages.

Bay of Biscay.

The bay just named was the principal scene of this fishery, which was almost entirely engrossed by the people inhabiting its interior shores; those of Bearn and

CHAP. XVI.

Basque fishers.

Gascony on the French side, and of Biscay on the Spanish. The Basques in particular soon surpassed all other nations, and carried to such perfection the processes connected with this pursuit, that the most expert whale-fishers in modern times have done little more than copy their usages. By degrees they extended their adventures into the northern seas, where they met the people of Iceland, a Norwegian colony, who had already engaged in this trade; and here, combining their efforts with those of the natives, they soon brought it into a very flourishing state.

Modern enterprise.

It was still, however, conducted on a small scale, when compared with the enterprise of modern times. Yet the first northern navigators were not attracted thither by this special object, but stumbled on it, as it were, in the course of their attempts to accomplish a passage to India by the Arctic seas. Barentz, in 1596, discovered Spitzbergen, long the main seat of the fishery, and even examined a considerable extent of its shores; but as the obstruction presented by this island defeated his hopes of reaching India, and as his voyage closed at last in disaster, no other result was obtained beyond a certain knowledge of geography and of the animal kingdom.

English operations.

The English were the first who pushed their operations into the depth of the Arctic Ocean. The Bear Island of the discoverer just mentioned, being rediscovered and named after Alderman Cherie, gave rise to a series of voyages for the capture of the walrus, of which some account has been already given. The views of the merchants were much extended, when Hudson, having engaged in his daring attempt to reach the Pole, surveyed Spitzbergen or East Greenland to its northern extremity; and although unable to penetrate farther, he gave information regarding the immense number of whales which were seen on those shores. Thenceforth the adventurers fitted out for discovery were instructed to cover their expenses, as far as might be, by the occasional capture of these valuable animals. This arrangement, as formerly remarked, was not happy, so far as the interests of

geographical science were concerned, since the considerations of profit too often superseded the main object of the voyage. Poole, in 1610, confined his views almost entirely to the capture of the walrus; but, as he saw a great abundance of whales, the Company next year sent out the Mary Margaret, furnished with Biscayan harpooners, and with every thing requisite for the great fishery. Captain Edge accordingly succeeded in taking a small whale, which yielded twelve tuns of oil; the first, as he conceives, that was ever extracted in those seas. Though the termination of this voyage was unfortunate, the Muscovy Company next season sent out two ships, the Whale and the Seahorse, to follow up the design. The Dutch, meantime, intent on every form of commercial adventure, had vessels that very year for the same purpose in the Greenland waters. These our countrymen chose to consider as interlopers, and, being the stronger party, compelled them to decamp without even attempting the fishery; and the following summer the Company obtained a royal charter, prohibiting all besides themselves to intermeddle in any shape with this valuable branch of industry. To make good this privilege, which the Dutch were not disposed to consider well founded, they fitted out seven well-armed ships, whose commanders, on reaching Spitzbergen, saw themselves anticipated by vessels belonging to different nations. All these they compelled either to depart, or to fish under the condition of delivering half of the proceeds to the English as the lords of the northern seas. So busy were they, however, in excluding others, that they themselves returned very slenderly laden. Foreigners exclaimed against this interference as a most flagrant instance of tyranny perpetrated by the new mistress of the ocean; and, indeed, the grounds on which England rested her claim do not, in any point of view, appear valid. She alleged, indeed, the prior occupation by Sir Hugh Willoughby; but supposing that the mere glimpse, through mist and tempest, of the Spitzbergen coast could have

Captain Poole.

First whale fishery.

Contentions with the Dutch.

CHAP. XVI.

Extravagant English claims.

established a permanent right to rule over the neighbouring waters, this discovery was shown by Peter Plancius the cosmographer to have been made by Barentz, and not by Sir Hugh. The commencement of the fishery by our countrymen formed certainly a better claim; though by no means sufficient to establish a perpetual sovereignty over those vast seas. The Hollanders, therefore, determined not only to refuse acquiescence, but to repel force by force; for which purpose they sent out fleets so numerous and so well armed, that for some years only slight annoyances were sustained by them; while the two governments appear to have looked on and allowed the adventurers to fight it out. At length, in 1618, a general encounter took place, which terminated to the disadvantage of the English, one of whose ships was taken and carried into Amsterdam. The Dutch administration, reluctant to involve themselves in a quarrel with their powerful neighbour, prudently restored the vessel with its lading and crew,—bestowing at the same time a reward on the gallant seamen who had made the capture. It now appeared expedient to put an end to this unseemly collision. There was admitted to be room enough for all the nations of Europe, provided they ceased to interfere with each other; and therefore a division was made of the coasts and bays of Spitzbergen among such states as had been accustomed to resort to the fishery. The English, allowed in some sense to have the best claim, were favoured with the first choice; they pitched upon Horizon Bay, Clock Bay, Safety Port, and Magdalena Bay, in the more southern part of the coast, and near the large island called Charles' Foreland. Then followed the other nations in the order of their adjudged rights. The Dutch selected the fine island at the north-west extremity, which they named Amsterdam, with three bays, one of which, between it and the mainland, they called Hollanders' Bay. The Danes and Hamburghers found an island and a bay between the Dutch and English stations: while the

Prudent conduct of the Dutch.

Division of the fishing ground.

French and Spaniards were obliged to content themselves with Biscayners' Point and other bleak promontories along the northern coast.

Muscovy Company.

The Muscovy Company by this arrangement were allowed full scope for carrying on the trade, from which they diligently excluded the rest of their countrymen. Their pursuits, however, were probably too various, and their transactions on too great a scale, for permitting them to bestow on this difficult branch that close attention which could alone render it productive. The gains of their fishery being more than absorbed by extensive losses, they gradually limited their transactions, till England scarcely sent a ship to the north, and saw all the markets filled by her industrious rivals.

Great success of the Dutch.

The Dutch, meantime, succeeded in converting it into a grand source of national wealth. At first, according to the usage of the time, they constituted an exclusive company, though on a somewhat liberal scale. The original body, formed at Amsterdam, was obliged to admit others belonging to Zealand and Friesland, and finally to receive into their number many wealthy individuals of the province of Holland. The nation, having thus invested an immense capital in this trade, carried it on with their characteristic prudence, and soon raised it to the highest pitch of prosperity. On their first arrival in the northern seas, the whales were seen extended on the face of the deep without any fear, and presenting themselves, as it were, to the stroke of the harpoon. The only difficulty was to carry them home; for one or two such large animals were sufficient to fill a ship. They therefore adopted the plan of extracting on the spot the oil and bones; thus reducing all the valuable substance into so small a compass, that one ship could convey the produce of an extensive fishery. They founded the village of Smeerenberg, in the bay of the same name, where fish were discovered in extraordinary abundance. Boilers, tanks, coolers, and all the requisite apparatus, were erected on an immense scale; and this station, during the summer, became

Village of Smeerenberg founded.

CHAP. XVI.

Industry and luxury.

crowded and populous, realizing in some degree the idea of a northern Batavia. In this dreary corner, too, were enjoyed all the luxuries of life, among which are specially mentioned hot rolls, prepared every morning; and upon a bell being rung, all the inhabitants ran to supply themselves with a dainty that seemed to belong to a different climate. Zorgdrager mentions that he entered this bay in 1697, and found it occupied by 188 vessels, having on board the produce of 1959 fish.

Changes of the fishing ground.

Under these circumstances, the trade, even in the hands of an exclusive company, became an abundant source of wealth. Soon, however, it experienced an unforeseen reverse. The whales, pursued and killed in such vast numbers, learned to dread the assault of that mighty destroyer who had invaded their haunts, undisturbed for so many ages. They gradually, and at last almost entirely, deserted Smeerenberg, removing into North Bay, where they were still taken with facility; but much loss of time was incurred in the conveyance of the carcasses to the former station. From this retreat, also, they gradually receded, and the fishers were obliged to follow them into the open sea, where both the capture and transportation became more and more difficult. These valuable animals relinquished part after part of their native deeps, and were every where compelled to give way before a power which they could not otherwise escape; seeking their final refuge near that great bank of ice which forms the western boundary of the Whale-fishers' Bight in the Greenland Sea. Thither it behoved the pursuers to repair; where, mooring themselves to frozen fields, they watched with no small hazard the movements of their prey. The expense and delay of conveying their prizes, sometimes 2000 miles, to the harbour of Smeerenberg, becoming very inconvenient, arrangements were made, by which the whale, being fastened to the sides of the ship, was *flensed*, or cleared of its blubber and bone; after which the carcass was consigned to the deep. The port then lost every foundation on which its prosperity had rested. The

Increasing difficulties of the fishery.

stores, furnaces, capacious vessels, and numerous utensils, were carried away; hence it is now difficult to trace the spot on which stood that once-flourishing settlement. At the same time the trade, becoming at once expensive and perilous, was no longer considered advantageous to an exclusive body. The company was accordingly dissolved, and the fishery thrown open to all who chose to engage in it: and such is the activity of individual enterprise, that, even under a diminished prospect of success, a greater number of ships than ever were fitted out from the ports of Holland.

Smeerenberg deserted.

The English meantime did not remain altogether unconcerned spectators of this commercial industry on the part of their neighbours. After the Muscovy Company was off the field, another was instituted under the title of "The Company of Merchants of London trading to Greenland." They subscribed a capital of £40,000, which was increased successively to £82,000, though only £45,000 was actually paid. This undertaking proved so disastrous that in nine years the entire funds were lost and the concern broken up. Its fall is traced by Elking to the wasteful management incident to large associations carrying on their business by uninterested agents. Their officers and men were paid by a fixed salary instead of receiving a share of the produce; and therefore it is not surprising that they should have spent long intervals on shore, amusing themselves with hunting deer, and appropriating to their own use the fruits of the chase. The wreck of their last ship, after the capture of eleven whales, precipitated their ruin.

London Company

The legislature, mortified that this trade, which was enriching the neighbouring nations, should prove so fruitless in the hands of Britons, redoubled their encouragements, and exempted from all duty the produce of the national whale-fisheries. Thus favoured, and stimulated by the representations of Mr Elking, the South Sea Company determined to embark in this pursuit a large proportion of their capital; and accordingly in 1725 they built twelve large vessels, fully sup-

South Sea Company

CHAP. XVI.

Failure of their attempt.

plied with all fishing-implements. These ships went out in spring, and returned with twenty-five fish, which did not quite pay the expense of equipment; however this, upon the whole, was thought not a bad beginning, and gave hopes of improvement, which were far from being fulfilled. In 1730 twenty-two were sent out, and returned with only twelve whales; so that a loss was incurred of nearly £9000. The following season was little better; and the Company, finding that in eight years they had expended an immense sum without the least prospect of repayment or profit, threw up the trade altogether.

British zeal.

Notwithstanding these repeated and signal failures, the British government did not relax their zeal. In 1732 a bounty of twenty shillings per ton was granted to every ship exceeding 200 tons employed in the whale-fishery. Several private individuals were thus induced to embark in the trade, and with tolerable success; yet there being still no appearance of its rising to any national importance, the bounty was extended, in 1749, to forty shillings. This produced at length the desired effect. In 1752 no fewer than forty sail went out, including several from Scotland, whose merchants, in 1750, had begun to participate in the adventure. In five years they increased to eighty-two; and down to 1775 the trade continued in a varying but generally prosperous state. Some regulations had been introduced, with the view of making it more efficient as a nursery of seamen; and in 1769 it was considered firmly established, after the nation had paid in bounties upwards of £600,000, then reckoned an enormous sum. These considerations induced the legislature, in 1777, to reduce the rate to thirty shillings; but the fishery could not support itself on this encouragement, and between the years 1775 and 1781 the vessels employed fell from 105 to 39. The allowance of forty shillings being restored, it regained its full prosperity, which soon appeared so steady as to admit the reduction of the bounty; the total amount of which, paid down to

Scottish enterprise.

Bounties paid.

1786, had not fallen short of £1,266,000. It was therefore reduced, in 1787, to thirty shillings; in 1792, to twenty-five shillings; and in 1795, to twenty shillings. Even under this lowest grant the fishery increased; able and intelligent whale-captains were formed; and Britain soon outstripped all other nations in a pursuit in which her first steps had been so tardy. Another circumstance doubtless much favoured this progress. The Dutch, having imprudently admitted the French into their territory, were soon absorbed in the destructive vortex of that revolutionary power. Involved in her long war with the mistress of the seas, and subjected to the anti-commercial policy of Napoleon, Holland saw all her fisheries, with every other branch of her foreign commerce, completely annihilated, and British vessels enjoying the undisturbed possession of the northern seas. Peace, indeed, at length re-opened to that nation all these channels of industry; but during a suspension of twenty years their habits were altered, their connexions dissolved, their most skilful and intrepid whale-fishers had died out; while England, which had been in a state of constant activity and improvement, was now every way an overmatch for her formerly successful rival.

Success of the British whale fisheries.

Before proceeding to describe the operations of the whale-fishery, it may be proper to mention some attempts which, with a view to its more effectual prosecution, were made to establish colonies on the shores of the Polar Sea.

Attempt at establishing Polar colonies.

In 1633 the Dutch planned a settlement on the northern coast of Spitzbergen, seven sailors having volunteered for this arduous undertaking. On the 30th August the fleet left them in North Bay, where they not only undertook to live during the winter, but even to provide themselves with fresh provisions. They visited all the surrounding shores, took three rein-deer and a number of sea-swallows, collecting also a great quantity of a species of water-cress. Their great ambition was to catch a whale; but, though tantalized by

CHAP. XVI.

the sight of many, all their attempts failed. Even one found dead and fresh on the margin of the sea was floated out by the tide before they could secure it.

Setting in of extreme cold.

It was on the 3d October that the extreme cold began to be felt, accompanied by the flight of numerous birds passing to the southward. On the 13th one of the casks of beer was frozen three inches thick. The winterers were obliged to break the ice in pieces, and thaw it before the fire; but it made a very unpalatable liquor. On the 15th, having ascended one of the neighbouring mountains, they could see only a small portion of the sun's disk on the verge of the horizon, and in a few days it entirely disappeared; there was still a faint twilight of eight hours, which was soon reduced to five, and became every day shorter and shorter. In November the cold increased to the utmost pitch; they could not sleep in their beds, but were obliged either to crouch over the fire or run at full speed through the hut, to keep up the vital energy. At length they ranged all their couches round the fire-place and a stove, yet still found it necessary to lay themselves down between the stove and the fire, holding their feet to the very embers.

Aurora Borealis.

On the 20th December they saw a very bright illumination, resembling the Aurora Borealis, over the southern part of the sky. They could not, however, believe it to be the real Aurora, which they afterwards saw of peculiar splendour in its proper place. Night and winter continued in their utmost intensity till the 22d January, when they again enjoyed a twilight of six hours; at mid-day of the 26th there was no longer a star to be seen; but it was the 22d February ere, from a mountain-top, they could descry any portion of the sun's disk.

Contests with the Polar bear.

Throughout the whole period they had dreadful contests to maintain with the Polar bear. On the 3d March one of these animals had received two balls in the throat, which he was endeavouring to pluck out with his paws, when the whole seven sailors rushed on him with their lances. The bear dashed at one of them, tore the lance from his hand, and threw him on the ground; but, as

the animal was about to destroy his victim, another sailor struck and obliged him to quit his hold. Afterwards, however, though pursued by all the seven, he plunged into the sea and escaped.

Health of the colonists.

It is remarkable that these persons passed this hard winter without any severe attack of scurvy; and on the 27th May they were overjoyed by the view of a boat, which conveyed them to a neighbouring bay, where several Dutch ships had assembled for the fishery. The active life led by these seamen must have been the chief cause by which their health was so well preserved.

Failure of the second attempt.

The success of this experiment induced the same Company to repeat the attempt in the following year, when seven other sailors, well furnished with victuals, and apparently with every means of withstanding the rigour of the climate, undertook to winter in Spitzbergen. They appear, however, to have been of a less active disposition than their predecessors, and failed in every attempt to procure fresh victuals. The sun having quitted them on the 20th October, they shut themselves up in their hut, out of which they scarcely ever stirred. In a few weeks they were attacked by scurvy in its most malignant form, which, in the absence of fresh meat and vegetables, assumed continually a more alarming type, till three died, whose bodies the others with difficulty enclosed in coffins. The survivors killed a dog and a fox, which afforded some relief, but not enough to arrest the progress of the malady. The bears began to approach the hut, and would have been a blessing, had the men retained strength either to shoot the animals or to drag home the carcass. Their mouths became ulcerated; they were unable to chew their biscuit; and only Jerome Carloen had power to rise from bed and kindle a fire. The sun appeared on the 24th February; but they could no longer derive aid from this benignant luminary. The last entry in their journal is in the following terms:—

Great sufferings and death.

"We are all four stretched on our beds, and are still alive, and would eat willingly, if any one of us were able to rise and light a fire. We implore the Almighty,

CHAP. XVI.

Return of the ships.

with folded hands, to deliver us from this life, which it is impossible to prolong without food or anything to warm our frozen limbs. None of us can help the other; each must support his own misery."—Early in spring the fishing-vessels arrived, and a party hastened to the hut. It was so fast closed that an entrance could only be effected by opening the roof. They found it a tomb. Three of the men were enclosed in the coffins which had been framed for them; the other four lay dead,—two in their beds, and two on a piece of sail spread on the floor. These last had perished in consequence of mere inability to make the effort necessary for lifting and dressing the food; and they had suffered convulsions so dreadful, that their knees and chin had come into contact, and their bodies resembled a rounded block.

The Dutch about the same time made an attempt to establish a colony on the island of Jan Mayen, but with a result equally fatal. The journal of the unfortunate seamen contains little except a very exact register of the weather.

Russian wintering.

No farther attempts were made at that time to colonize Spitzbergen; and the next instance of wintering on those dreary shores arose from necessity. A Russian vessel, which had sailed from Archangel for the whale-fishery in 1743, being driven by the wind to the eastern side of the island, found itself beset amid floating ice without hope of deliverance. One of the party recollected that a hut had been erected on this coast by some of his countrymen, under the apprehension of being obliged to spend the winter there. He and three others set out to discover the place. With much difficulty they reached the land, leaping from fragment to fragment of moving ice; then, spreading themselves in different directions, they found the cottage, which, though ruinous, afforded shelter for the night. Early in the morning they hastened to the shore, to convey to their comrades this happy intelligence. But what must have been their horror, when they saw only a vast open sea, without a vestige of the ship, or even of the numerous

icebergs which had been tossing through the waves. A violent gale had dispersed them all, and apparently also destroyed the vessel, which was never heard of more.

Courage and perseverance.

These four unfortunate seamen, abandoned in such frightful circumstances, having the long winter to pass without food, or implements to procure any, did not, however, give way to despair. They had a gun, with which they shot twelve deer; then their ammunition failed; but some pieces of iron were found on the shore, which they contrived to fashion into pikes. At the moment when their stock of venison was nearly exhausted, they found occasion to employ these weapons against a Polar bear by which they were assailed. The animal, being vanquished and killed after a formidable struggle, supplied for the present all their wants. His flesh was food, his skin clothing, his entrails, duly prepared, furnished the string, which alone had been wanting to complete a bow. With that instrument, they were more than a match for the rein-deer and the Arctic fox, with the spoils of which they filled both their pantry and their wardrobe; and thenceforth they avoided, unless in cases of necessity, the encounter of the bear. Being destitute of cooking-utensils, they were obliged to devour the food nearly raw—dried either by suspension in the smoke during the long winter, or by exposure to the heat of the sun during the short summer. Yet this regular supply of fresh meat, and, above all, the constant exercise to which necessity prompted, enabled them to preserve their health entire during six years, in which they looked in vain for deliverance. In this time they killed 10 bears, 250 rein-deer, and a multitude of foxes. At the end of the period one of them died, when the three survivors sunk into despondence, giving up all hopes of relief, and looking forward to the moment when the last of them would become the prey of the bears. Suddenly, on the 15th August 1749, having descried a vessel at sea, they lighted fires on the heights, hoisted a flag formed of rein-deer skins, and were at length discovered by the ship, which proved to belong

Successful assault on a Polar bear.

Continued health.

CHAP. XVI.

Escape from the ice.

to their native country. They loaded her with such a quantity of skins and lard as enabled them to pay eighty rubles for their passage, and afterwards to make a profitable voyage.

The example, thus involuntarily set by these Russian sailors, has been followed to a considerable extent by their countrymen, some of whom have since regularly wintered in huts on the Spitzbergen coast, employing themselves in chasing the walrus and seal along the shore, and the deer and Arctic fox in the interior. They are constantly engaged in hunting, unless when interrupted by tempest; and, even when the hut is blocked up with snow, they find their way out by the chimney. They have a reserve of salt provisions; but as much as possible subsist on the flesh and drink the warm blood of the rein-deer, digging under the snow for cochlearia, sorrel, and other plants that act as antidotes to scurvy. By this regimen they generally preserve their health completely uninjured; though the British employed in whale-fishing have occasionally found the body of a Russian who had fallen a victim to this dreadful malady.

Russian adventure.

It is now time to give some account of the mode of catching whales, as practised by the two great fishing-nations of the present day,—the British and the Dutch.

Whale ships

The first object is to fit out a ship suited to the trade. While the fishery was carried on in bays, or on the exterior margin of icy fields, very slight fabrics were sufficient; but now that the vessels depart early in the season, and push into the very heart of the northern ices, they are liable every moment to the most severe shocks and concussions. The ship, therefore, must be constructed in such a manner as to possess a peculiar degree of strength. Its exposed parts are secured with double or even treble timbers; while it is *fortified*, as the expression is, externally with iron plates, and internally with stanchions and cross-bars, so disposed as to cause the pressure on any one part to bear upon and be supported by the whole structure. Mr Scoresby recommends the dimension of 350 tons as the most eligible.

Fortified bows.

A ship of this size is sometimes filled; and the number of men required for its navigation, being also necessary for manning the boats employed in the fishery, could not be reduced even in a much smaller vessel. A larger tonnage than 350, being scarcely ever filled, involves the proprietor in useless expense. The Dutch are of opinion, that the vessels destined for this service should be 112 feet long, 29 broad, and 12 deep, carrying seven boats, and from forty to fifty seamen. One of the most essential particulars is the crow's nest, a species of sentry-box made of canvass or light wood, pitched on the maintop-mast, or top-gallant-mast head. This is the post of honour, and also of severe cold, where the master, provided with a telescope and a speaking-trumpet, often sits for hours in a temperature thirty or forty degrees below the freezing-point, and whence he can descry all the movements of the surrounding seas, and give directions accordingly.

Crew and tonnage.

The whaling-vessels usually take their departure in such time as to leave the Shetland Isles about the beginning of April, and before the end of the month arrive within the Polar Seas. It was long customary to spend a few weeks at what is called the Seal-fisher's Bight, extending along the coast of Greenland, ere they pushed into those more northern waters where, amid fields of ice, the whale is commonly found; but in later times it has become usual to sail at once into that centre of danger and enterprise.

Departure of the whaling vessels.

As soon as they have arrived in those seas, the crew must be every moment on the alert, keeping watch day and night. The seven boats are suspended by the sides of the ship, ready to be launched in a few minutes; and, when the state of the weather admits, one of them is usually manned and afloat. These boats are from 25 to 26 feet long, about 5½ feet broad, and constructed with a special view to lightness, buoyancy, and easy steerage. As soon as the person in the crow's nest hears the blowing of the huge animal which they seek to attack, or sees its back emerging from the waves, he gives

Alertness of the crews.

CHAP. XVI.

Whale in sight.

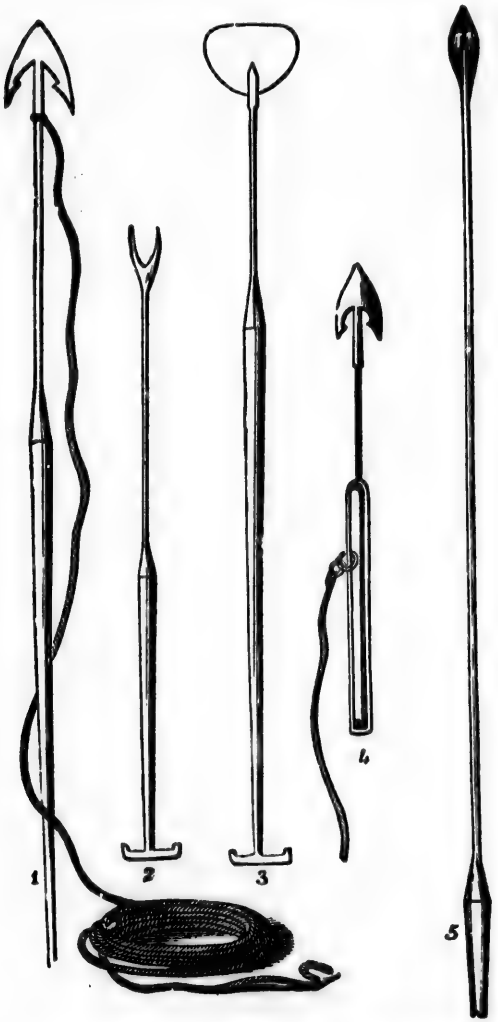
notice to the watch who are stationed on deck, part of whom leap into a boat, which is instantly lowered down, and followed by others. Each of the boats has a harpooneer and one or two subordinate officers, and is provided with an immense quantity of rope coiled up and stowed in different quarters of it, the several parts being spliced together so as to form a continued line, usually exceeding four thousand feet in length. To the end is attached the *harpoon* (fig. 1), an instrument formed, not to pierce and kill the animal, but, by entering and remaining fixed in the body, to prevent its escape. One of the boats is now rowed towards the whale in the deepest silence, cautiously avoiding to give an alarm, of which he is very susceptible. Sometimes a circuitous route is adopted in order to attack him from behind. Having approached as near as is consistent with safety, the harpooner darts his instrument into the back of the monster.* This is a critical moment; for, often when the mighty animal feels the wound, he throws himself into violent convulsive movements, vibrating in the air his tremendous tail, one lash of which is sufficient to dash a boat in pieces. More commonly, however, he plunges rapidly into the sea, or beneath the thickest fields of ice. While he is thus moving, at the rate usually of eight or ten miles an hour, the utmost diligence must be used, that the line to which the harpoon is attached may run off smoothly and readily along with him. Should it be entangled for a moment, the strength of the whale is such that he would draw down the boat and crew after him. The first boat ought to be quickly followed up by a second, to supply more line when the first is run out, which often takes place in eight or ten minutes. When this inconvenience is dreaded, the men hold up one, two, or three oars, to intimate their pressing need of a supply.

Harpoon.

Striking the whale.

Signals.

* The harpoon is sometimes discharged from a peculiar species of gun, in which case the form fig. 4 is employed; but this mode has not come into very general use.



1. Hand Harpoon. 2. Pricker. 3. Blubber Spade.
4. Gun Harpoon. 5. Lance.

CHAP. XVI.

Retarding the line.

At the same time they turn the rope once or twice round a kind of post called the bollard or billet-head, by which the motion of the line and the career of the animal are somewhat retarded. This, however, is a delicate operation, which brings the side of the boat down to the very edge of the water, and if the rope is drawn at all too tight, may sink it altogether. While the line is whirling round the bolard, the friction is so violent that the harpooneer is enveloped in smoke, and water must be constantly poured on to prevent it from catching fire. When, after all, no aid arrives, and the crew find that the line must run out, they have only one resource,—they cut it, losing thereby not only the whale, but the harpoon and all the ropes of the boat.

Summoning the crew.

When the whale is first struck and plunges into the waves, the boat's crew elevate a flag as a signal to the watch on deck, who give the alarm to those asleep below, by stamping violently on the deck, and crying aloud—"*A fall! A fall!*" (Dutch, *val*, expressing the precipitate haste with which the sailors throw themselves into the boats.) On this notice they do not allow themselves time to dress, but rush out in their sleeping-shirts or drawers into an atmosphere the temperature of which is often below zero, carrying along with them their clothing in a bundle, and trusting to make their toilet in the interval of manning and pushing off the boats.

Reappearance of the whale.

The period during which a wounded whale remains under water is various, but is averaged by Mr Scoresby at about half an hour. Then, pressed by the necessity of respiration, he appears above, often considerably distant from the spot where he was harpooned, and in a state of great exhaustion, which the same ingenious writer ascribes to the severe pressure that he has endured when placed beneath a column of water 700 or 800 fathoms deep. All the boats have meantime been spreading themselves in various directions, that one at least may be within a *start*, as it is called, or about 200 yards of the point of his rising, at which distance they

can easily reach and pierce him with one or two more harpoons before he again descends. On his re-appearance a general attack is made with lances (fig. 5), which are struck as deep as possible, to reach and penetrate the vital parts. Blood mixed with oil streams copiously from his wounds and from the blow-holes, dyeing the sea to a great distance, and sometimes drenching the boats and crews. The animal now becomes more and more exhausted; but, at the approach of death, he often makes a convulsive struggle, rearing his tail high in the air, and whirling it with a noise which is heard at the distance of several miles. At length, quite overpowered, he lays himself on his side or back, and expires. The flag is then taken down, and three loud huzzas raised from the surrounding boats. No time is lost in piercing the tail with two holes, and through these ropes are passed, by which the fish is towed to the vessel.

General attack.

Death of the whale.

The whale being secured to the sides of the ship, the next operation is that of *flensing*, or removing the blubber and whalebone,—a process which, if the full strength of the crew be put upon it, may be executed in about four hours, though a much longer time is often employed. The captain goes round and gives a dram to each seaman, with double allowance to important personages called the kings of the blubber (Dutch *speck-kóning*), whose office it is to receive that precious commodity, and stow it in the hold. Another high functionary, called the *specksioneer*, has the direction of all the cutting operations. The first step is to form round the fish, between the neck and the fins, a circle called the *kent*, around which all proceedings are to be conducted. To it is fastened a machinery of blocks, called the kent-purchase, by which, with the aid of a windlass, the body of the whale can be turned on all sides. The harpooneers then, under the specksioneer's direction, begin with a kind of spade (fig. 3), and with huge knives, to make long parallel cuts from end to end, which are divided by cross-cuts into pieces of about half a ton These are conveyed on deck, and, being reduced into

Flensing.

Specksioneer.

CHAP. XVI.

Packing the blubber.

smaller portions, are received by the two kings, who stow them in the hold. Finally, being by other processes still farther divided, the blubber is put into casks, and the packing completed by the instrument No. 2. As soon as the cutting officers have cleared the whole surface lying above water, which does not exceed a fourth or a fifth of the animal, the kent-machinery is applied, and turns the carcass round till another part yet untouched is presented. This being also cleared, the mass is again turned, and so on till the whole has been exposed, and the blubber removed. The kent itself is then stripped, and the bones of the head being conveyed on board, there remains only the *kreng*, a huge heap of muscular substance, which is abandoned, either to sink, or be devoured by the flocks of ravenous birds and sharks which duly attend on this gratifying occasion.

Varying success.

The success of the fishery varies with the spot in which whales are found; the most advantageous being the border of those immense fields of ice, with which a great extent of the Arctic Ocean is covered. In the open sea, when a whale is struck, and plunges beneath the waters, he may rise in any part of a wide circuit, and at any distance from the boats; so that, before a second harpoon can be struck, he may plunge again, and by continued struggles effect his extrication. But, in descending beneath the ice he is hemmed in by the floor above, and can only find an atmosphere to breathe by returning to its outer boundary. The space in which he can rise is thus contracted from a large circle to a semicircle, or even smaller segment. Hence a whale in this position is attacked with much better chance of success; even two may be pursued at the same moment, —a measure which, in the open sea, often occasions the loss of both. In the flourishing state of the Dutch fishery, a hundred of their vessels have been seen at once ranged on the margin of one of those vast fields, along which the boats formed so continuous a line that no whale could rise without being immediately struck.

Advantages near the ice.

This situation, at the same time, is attended with considerable danger from the disruptions and concussions to which these plains are liable.

Advantages and dangers.

When the ship is surrounded with floating fragments of ice, the fishery, though difficult, is usually productive. But the case is very different when these pieces are packed together into a mass impervious to the boats, yet leaving numerous holes or openings, through which the whale can mount and respire, without coming to the open margin or within reach of his assailants. The fishers, when they see the whale blowing through one of these apertures, must alight on the ice, and run full speed to the spot with lance and harpoon. Attack in such circumstances, however, is extremely perilous; and even when the whale is killed, the dragging of his body either under or over the ice to the ship is a most laborious task, which, in the last case, cannot be effected without cutting the carcass in pieces.

Bay ice.

In the progress of the season, when the frozen surface becomes open at various points, the fishery is liable to the same evils as occur among packed ice. Still worse is the case when the sea is overspread with that thin, newly formed crust called bay-ice; for the whale easily finds or beats a hole through this covering, while the boats can neither penetrate nor the men walk over it, without the most imminent danger. Yet Mr Scoresby mentions a plan by which he continued to carry on his movements, over a very slender surface of this kind. He tied together his whole crew, and made them thus walk in a long line one behind another. There never fell in above four or five at a time, who were easily helped out by the rest. The sufferers had a dram to console them after their cold plunge; and the compensation was considered so ample, that Jack was suspected of sometimes allowing himself to drop in with the view of being thus indemnified.

Ingenious device.

Another grand distinction respects, first, the Greenland fishery, which, generally speaking, is that already described, and is chiefly distinguished by the immense

CHAP. XVI. fields of ice which cover the ocean; and, secondly, the Davis' Strait fishery, where that element appears chiefly in the form of moving mountains, tossing through the deep. This last is dangerous, but usually productive. It commenced at a comparatively late period, since it is not mentioned by the Dutch writers prior to 1719; and Mr Scoresby has been unable to ascertain the date when it was begun by the British. At a comparatively recent period, however, it experienced a remarkable extension, of which a full account will be given in the course of this chapter.

Davis' Strait fishery.

Hazards of the fishery.

The hazards of the whale-fishery, in spite of the utmost care, and under the direction even of the most experienced mariners, are many and great.

The most obvious peril is that of the ship being beset and sometimes dashed to pieces by the collision of the icy mountains with which those seas are continually filled. The Dutch writers mention numerous shipwrecks, among which the following are the most remarkable:—

Didier Albert Raven.

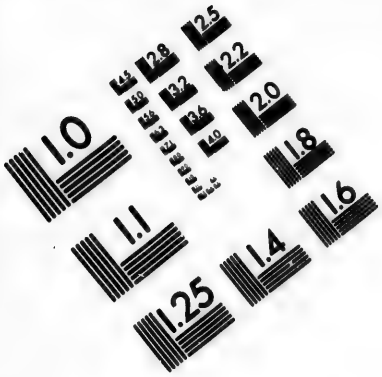
Didier Albert Raven, in 1639, when on the border of the Spitzbergen ice, was assailed by a furious tempest. Though the ship was violently agitated, he succeeded in steering her clear of the great bank, and thought himself in comparative safety, when all at once there appeared before him two immense bergs, upon which the wind was violently driving his vessel. He endeavoured, by spreading all his sails, to penetrate between them; but in this attempt the ship was borne against one with so terrible a shock that it was soon felt to be sinking. By cutting the masts she was enabled to proceed; yet, as she continued to take in water, several boats were launched, which, being overcrowded, sunk, and all hands perished. Those left on board found their condition more and more desperate. The fore-part of the vessel being deep in the water, and the keel rising almost perpendicular, made it extremely difficult to avoid falling into the sea; while a mast, to which a number had clung, broke, fell down, and involved them in the fate of their unfortunate companions. At

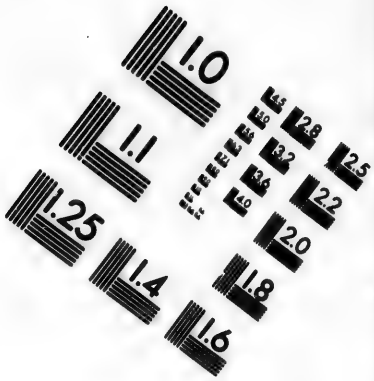
length the stern separated from the rest of the vessel, carrying with it several more of the sailors. The survivors still adhered to the wretched fragments, but one after another was washed off by the fury of the waves, while some, half-dead with cold and unable to retain their grasp of the ropes and anchors, dropped in. The crew of eighty-six was thus reduced to twenty-nine, when the ship suddenly changed its position, and assumed one in which they could more easily keep their footing on board. The sea then calmed, and during the respite thus afforded they felt an irresistible propensity to sleep; but to some it was the fatal sleep of extreme cold, from which they never awoke. One man suggested the construction of a raft, which was accordingly framed, contrary to the captain's advice; happily, no sooner was it launched than the waves swallowed it up. The remnant of the vessel encountered next night another severe gale; and the sufferings of the crew, from cold, hunger, and burning thirst, were so extreme that death in every form seemed now to have encompassed them. In the morning, however, a sail was descried, their signals were understood, and being taken on board, twenty survivors, after forty-eight hours of this extreme distress, were restored to safety.

Continued sufferings.

In 1670 the Bleacher, Captain Pit, was driven against the ice with such violence that in an instant all her rigging was dashed in pieces. Soon after twenty-nine of the crew quitted the vessel, and, leaping by the help of poles and perches from one fragment of ice to another, contrived to reach the main field. The captain with seven men remained on board, and endeavoured to open a passage; but the ship soon struck again, when they were obliged to go into a boat, and commit themselves to chance, the snow falling so thickly that they could scarcely see one another. As the weather cleared they discovered their companions on the ice, who threw a whale-line, and dragged them to the same spot. There the party, having waited twelve hours in hopes of relief,

Wreck of the Bleacher.





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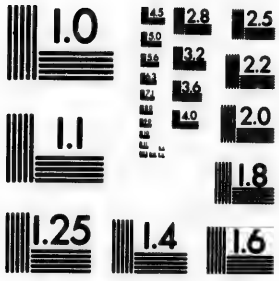

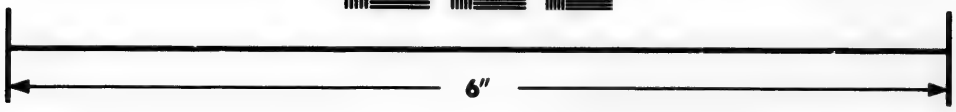

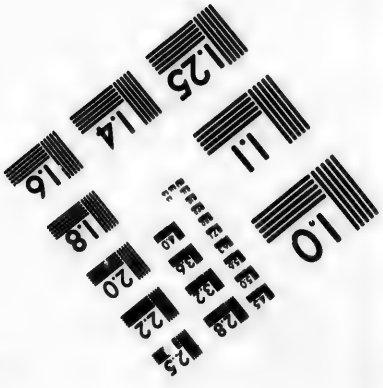

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CHAP. XVI.

at length trusted themselves to the boats, and in twelve hours were taken up by a Dutchman.

Disasters of Captain Bille.

Captain Bille, in 1675, lost a ship richly laden, which went down suddenly; and the crew were not saved until after having been exposed in boats fourteen days. Thirteen other vessels perished that year in the Spitzbergen seas. Three seasons afterwards Captain Bille lost a second ship by the violent concussion of the ice, the crew having just time to save themselves on a frozen field. At the moment of their disaster they were moored to a large floe along with another, a brig called the Red Fox; which last shortly afterwards underwent a similar fate, being struck with such violence that the whole, hull and masts together, disappeared almost in an instant,—the sailors having had merely time to leap on the ice. The united crews now adopted various plans,—some remaining where they were, others setting out in boats in different directions; but all, in one way or other, reached home. The same year the Concord went down in an equally sudden manner; but the crew were happily rescued by a neighbouring ship.

Unexpected deliverances.

But the whale-fishery is not more remarkable for examples of sudden peril than for unexpected deliverance from the most alarming situations. For instance, three Dutch ships, in 1676, after having completed a rich cargo on the northern coast of Spitzbergen, were at once so completely beset, that the crews in general urged the necessity of proceeding over the ice, and endeavouring to reach some other vessel. Ouvekees, however, captain of one of the three, pressed the obligation of doing all in their power to preserve such valuable property, and they agreed to make a farther trial; when, in twenty days, the ice opened, and they had a happy voyage homeward.

The Dame Maria Elizabeth.

The Dame Maria Elizabeth, in 1769, had set out early for the fishery, and was so fortunate, by the 30th of May, as to have taken fourteen whales. Then, however, a violent gale from the south blew in the ice with such

violence, that the captain found himself completely beset, and saw two Dutch vessels and one English go to pieces at a little distance. At length a stirring breeze from the north gave him the hope of being extricated; when presently he was involved in a dense fog, which froze so thickly upon the sails and rigging that the ship appeared a mere floating iceberg. On the atmosphere clearing, the faint light, and the migration of birds to the southward, announced the approach of winter. Unable to make any progress, the seamen contemplated with despair the necessity of spending the season in that frozen latitude. They had nearly come to the end of their provisions, and famine was already staring them in the face, when they thought of broiling the whales' tails, which proved very eatable, and even salutary against the scurvy. Thus they hoped to exist till the middle of February, beyond which the prospect was very dismal; but on the 12th November there arose a violent north wind, that dispersed the ice. Their hopes being now awakened, every effort was strained; and on the 18th a north-wester brought on so heavy a rain that next day they were entirely clear of the ice, and had a prosperous voyage homeward.

Dense fog.

Failure of provisions.

The year 1777 was one which exhibited on a large scale all the vicissitudes of this occupation. Captain Broerties, in the Guillamine, arrived that year on the 22d June at the great bank of ice, where he found fifty vessels moored and busied in the fishery. He began it successfully: indeed, the very next day he killed a large whale. On the morrow a tempest drove in the ice with such violence that twenty-seven of the ships were beset, and ten were lost. On the 25th July, seeing some appearance of an opening, he caused the Guillamine to be warped through by the boats; but after four days' labour he found himself, with four other ships, in a narrow basin enclosed by icy barriers on every side. Apprehending the danger of being permanently beset, he obliged the men to submit to a diminution of their rations.

Loss of ten ships.

CHAP. XVI.

Gathering of the ice.

On the 1st August the ice began to gather thickly, and a violent storm driving it against the vessels, placed them in the greatest peril for a number of days. On the 20th a dreadful gale arose from the north-east, in which the Guillamine suffered very considerable damage; and in this awful tempest, out of the five ships two went down, while a third sprung a number of leaks. The crews were taken on board of the remaining two, which they greatly incommoded. On the 25th all the three were completely frozen in, when it was resolved to send a party of twelve men to seek aid from four vessels which a few days previously had been driven into a station at a little distance; but before they arrived two of these had been dashed to pieces, and the other two were in the most deplorable condition.

Continued tempest.

Two Hamburghers, somewhat farther removed, had perished in a similar manner. Meantime the Guillamine and her consorts came in sight of Gale Hamkes' Land in Greenland, and, the tempest still pushing them gradually to the southward, Iceland at length appeared on their left. The two others just mentioned, commanded by Dirk Broer and Roel of Meyer, found a little opening, through which they contrived to escape. The crews of the three first were beginning to hope that they might at last be equally fortunate, when, on the 13th September, a whole mountain of ice fell upon the Guillamine. The men, half naked, leaped out upon the frozen surface, saving with difficulty a small portion of their provisions, and the broken remnants of the vessel were soon buried under enormous piles of ice. The second, commanded by Jeldert Janz, had just met a similar fate, and there remained only that of Jans Castricum, to which all now looked for refuge. By leaping from one fragment to another, the men, not without danger, contrived to reach this vessel, which, though in extreme distress, received them on board. Shattered and overcrowded, she was obliged immediately after to accommodate fifty other seamen, the crew of the Jans Christiaanz of Hamburgh, which had also gone

Wreck of the Guillamine.

down, the chief harpooner and twelve of the mariners having perished. These numerous companies, squeezed into the crazy bark of Castricum, suffered every kind of distress, and were besides menaced with the dread of famine. All remoter fears, however, gave way, when, on the 11th October, the vessel went to pieces in the same sudden manner as the others, leaving the unfortunate sailors scarcely time to remove to the ice with their remaining stores. With great difficulty they reached a field of some extent, and with their torn sails contrived to rear a sort of covering; but sensible that by remaining on this desolate spot they must certainly perish, they saw no safety except by attempting to reach the coast of Greenland, which was in view. With infinite toil they effected their object, and happily met some inhabitants, who entertained them hospitably, and regaled them with dried fish and seal's flesh. Thence they pushed across that dreary region, treated sometimes well, sometimes churlishly; but by one means or other they succeeded at length, on the 13th March, in reaching the Danish settlement of Fredericks-haab. Here they were received with the utmost kindness; and, being recruited from their fatigues, took the first opportunity of embarking for Denmark, whence they afterwards sailed to their native country.

Wreck of Castricum's vessel.

The Davis' Strait fishery has also been marked with very frequent and fatal shipwrecks. In 1814, the Royalist, Captain Edmonds, was lost with all her crew; and in 1817 the London, Captain Mathews, shared the same fate. The only account ever received of either of these ships was from Captain Bennet of the Venerable, who, on the 15th April, saw the London, in a tremendous storm, lying to windward of an extensive chain of icebergs, by some of which it is probable she was dashed to pieces that very evening.

Davis' Strait shipwrecks.

Among accidents on a smaller scale, one of the most frequent is that of boats employed in pursuit of the whale being overtaken by fogs or storms of snow, which prevent them from regaining the vessel. A fatal instance of this

CHAP. XVI.

Loss of boats crews.

kind occurred to the Ipswich, Captain Gordon; four of whose boats' crews, after a fish had been caught, and even brought to the ship's side, were employed on a piece of ice hauling in the line, when a sudden storm drifted her so rapidly away, that notwithstanding the utmost efforts, she never came within reach of the unfortunate men who composed the greater part of her establishment. Mr Scoresby mentions several casualties of the same nature which occurred to his boats' companies; all of whom, however, in the end, happily found their way back. One of the most alarming cases was that of fourteen individuals who were left on a small piece of floating ice, with a boat wholly unable to withstand the surrounding tempest; but amid their utmost despair they fell in with the Lively of Whitby, and were most cordially received on board.

Source of greatest danger.

The source, however, of the greatest danger to the whale-fisher arises from the physical strength of the animal with which he ventures to contend. Generally, indeed, the whale, notwithstanding his immense power, is extremely gentle,—seeking, even when he is most hotly pursued, to escape from his assailants by plunging into the lowest depths of the ocean. Sometimes, however, he exerts his utmost force in violent and convulsive struggles; and every thing with which, when thus enraged, he comes into collision, is dissipated or destroyed in an instant. The Dutch writers mention Jacquez Vienkes of the Gort Moolen (Barley Mill), who, after a whale had been struck, was hastening with a second boat to the support of the first. The animal, however, rose, and with its head struck the boat so furiously as to shiver it in pieces, and Vienkes was thrown with its fragments on the back of the huge creature. Even then, this bold mariner darted a second harpoon into the body of his victim; but unfortunately he got entangled in the line and could not extricate himself, while the other party were unable to approach near enough to save him. At last, however, the harpoon was disengaged, and he swam to his men.

Jaques Vienkes.

Mr Scoresby, in one of his earliest voyages, saw a boat

thrown several yards into the air, which falling on its side, plunged the crew into the sea; but they were happily taken up, when only one was found to have received a severe contusion. Captain Lyons, commanding the Raith of Leith, on the Labrador coast, in 1802, had a boat thrown fifteen feet into the air: it came down into the water with its keel upwards, yet all the men except one were saved.

Captain Lyons.

In 1807, a party under Mr Scoresby the elder had struck a whale, which soon reappeared, but in a state of such violent agitation that no one durst approach it. The captain courageously undertook to encounter it in a boat by himself, and succeeded in striking a second harpoon; but another boat having advanced too close, the animal brandished its tail with so much fury that the harpooner, who was directly under, judged it most prudent to leap into the sea. The tail then struck the very place he had left, and cut the boat entirely asunder, with the exception of two planks, which were saved by having a coil of ropes laid over them; so that, had he remained, he must have been dashed to pieces. Happily all the others escaped injury. The issues, however, were not always so fortunate; for the Aimwell of Whitby, in 1810, lost three men out of seven, and in 1812 the Henrietta of the same port lost four out of six, by the boats being upset and the crews thrown into the sea.

Remarkable escape.

In 1809, one of the men belonging to the Resolution struck a sucking-whale; after which the mother, being seen wheeling rapidly round the spot, was eagerly watched. Mr Scoresby, being on this occasion in the capacity of harpooner in another boat, was selecting a situation for the probable reappearance of the parent fish, when suddenly an invisible blow stove in fifteen feet of the bottom of his barge, which filled with water and instantly sunk. The crew were saved.

The Resolution crew

Entanglement in the line, while the retreating whale is drawing it off with rapidity, is often productive of great disaster. A sailor belonging to the John of Greenock, in 1818, happening to step into the centre of a coil of run-

CHAP. XVI.

Entanglement in the line.

ning rope, had a foot entirely carried off, and was obliged to have the lower part of the leg amputated. A harpooner, belonging to the Henrietta, had incautiously cast some part of the line under his feet; when a sudden dart of the fish made it twist round his body. He had just time to cry out,—"Clear away the line! O dear!" when he was cut almost asunder, dragged overboard, and never more seen.

Apparent death.

A whale sometimes causes danger by proving to be alive after having exhibited every symptom of death. Mr Scoresby mentions an instance of one which appeared so decidedly dead that he himself had leaped on the tail, and was busy putting a rope through it, when he suddenly felt the animal sinking from beneath him. He made a spring towards a boat at some yards' distance, and, grasping the gunwale, was assisted on board. The fish then moved forward, reared his tail aloft, and shook it with such prodigious violence that it resounded to the distance of several miles; but after two or three minutes of this violent exertion, he rolled on his side and expired.

Danger in flensing.

Even after life is extinct all danger is not over. In the operation of flensing, the harpooners sometimes fall into the whale's mouth, at the imminent hazard of being drowned. In the case of a heavy swell they are drenched, and sometimes washed over by the surge. Occasionally they have their ropes broken, and are wounded by each other's knives. Mr Scoresby mentions an instance of a man who, after the flensing was completed, happened to have his foot attached by a hook to the kreng or carcass, when the latter was inadvertently cut away. He caught hold of the gunwale of the boat; but the whole immense mass was now suspended by his body, occasioning the most excruciating torture, and even exposing him to the risk of being torn asunder, when his companions contrived to hook the kreng with a grapnel, and bring it back to the surface.

The whale, in attempting to escape, sometimes exerts prodigious strength, and inflicts upon its pursuers not

only danger, but the loss of their property. In the year 1812, a boat's crew belonging to the Resolution struck one on the margin of a floe. Supported by a second boat, they felt much at their ease, there being scarcely an instance in which the assistance of a third was required in such circumstances. Soon, however, a signal was made for more line, and as Mr Scoresby was pushing with his utmost speed, four oars were raised in signal of the greatest distress. The boat was now seen with its bow on a level with the water, while the harpooner, from the friction of the line, was enveloped in smoke. At length, when the relief was within a hundred yards, the crew were seen to throw their jackets upon the nearest ice, and then leap into the sea; after which the boat rose into the air, and, making a majestic curve, disappeared beneath the waters with all the line attached to it. The crew were saved. A vigorous pursuit was immediately commenced; and the whale, being traced through narrow and intricate channels, was discovered considerably to the eastward, when three harpoons were darted at him. The line of two other boats was then run out, when, by an accidental entanglement, it broke, and enabled the whale to carry off in all about four miles of rope, which with the boat were valued at £150. The daring fishers again gave chase; the whale was seen, but missed. A third time it appeared, and was reached; two more harpoons were struck, and the animal, being plied with lances, became entirely exhausted, and yielded to its fate. It had by that time drawn out 10,440 yards, or about six miles of line. Unluckily, through the disengagement of a harpoon, a boat and thirteen lines, nearly two miles in length, were detached and never recovered.

Prodigious strength of the whale.

Great losses.

Whale-fishers sometimes meet with agreeable surprises. The crew of the ship Nautilus had captured a fish, which being disentangled and drawn to the ship, some of them were employed to haul in the line. Suddenly they felt it pulled away as if by another whale, and having made signals for more line, were soon satisfied, by the continued movements, that this was the case. At

Singular capture.

CHAP. XVI.

Double capture of whales.

length a large one rose up close to them, and was quickly killed. It then proved that the animal, while moving through the waters, had received the rope into its open mouth, and struck by the unusual sensation, held it fast between its jaws, and thus became an easy prey.—A Hull ship, the Prince of Brazils, had struck a small fish, which sunk apparently dead. The crew applied all their strength to heave it up; but sudden and violent jerks on the line convinced them that it was still alive. They persevered, and at length brought up two in succession, one of which had many turns of the rope wound round its body. Having been entangled under water, it had, in its attempt to escape, been more and more implicated, till, in the end, it shared the fate of its companion.

Recent new channels of the trade.

A view of the whale-fishery, as it existed prior to 1820, has thus been drawn from ample and authentic materials afforded by the Dutch and other early writers, as well as by the valuable work of the younger Mr Scoresby. Having understood, however, that the trade had been turned into several new channels, we applied in 1834 to certain intelligent individuals at the principal ports, from whom we obtained such valuable information as enables us to continue to that period the history of its operations. We can now add some recent information, which will bring it down to the end of 1844.

Remarkable changes of locality.

Remarkable changes have lately taken place as to the waters in which the fishery is carried on. For more than a hundred years it was confined to the sea between Spitzbergen and Greenland; but early in the eighteenth century Davis' Strait began to be frequented, and the ships sent thither gradually increased in number. A somewhat more ample return, in fact, was drawn from those western seas, though Mr Scoresby conceives that the longer and more expensive voyage, and the increased hazards, fully counterbalanced this advantage. At the time he wrote, the Greenland fishery was still the more considerable, and the ships proceeding thither were in the proportion

of three to two. Since that period, however, the whales, which during the course of two centuries had been gradually retiring from place to place, sought refuge in the remoter depths of the Icy Sea.—Hence this fishery was almost abandoned,—having employed in 1829 only one vessel; in 1831, the number was increased to nineteen, but in the succeeding year it declined to three; and in 1835 was again reduced to one. To compensate for the loss of their original ground, the whalers have had a more extensive field opened up to them on the western coast. The important expeditions sent out by government under Ross and Parry have made them acquainted with a number of admirable stations on the farther side of Davis' Strait and in the higher latitudes of Baffin's Bay, which were before little known and scarcely ever frequented.

Abandonment of Greenland.

The vessels destined for that quarter sail usually in March, though some delay their departure till the middle or even the end of April. They proceed first to the northern parts of the coast of Labrador, or to the mouth of Cumberland Strait, carrying on what is called the South-west Fishery. After remaining there till about the beginning of May, they cross to the eastern shore of the strait, and fish upwards along the coast, particularly in South-east Bay, North-east Bay, Hingston Bay or Horn Sound. About the month of July they usually cross Baffin's Bay to Lancaster Sound, which they sometimes enter, and occasionally even ascend Barrow's Strait twenty or thirty miles. In returning, they fish down the western shore, where their favourite stations are Pond's Bay, Agnes' Monument, Home Bay, and Cape Searle. If the ships be not previously filled, they commonly remain till the end of September, and in some instances persevere till late in October. Our informant at Peterhead mentions a vessel from that port which was *clean* on the last day of September; yet the captain proceeded with such spirit and resolution that after this date he caught five whales, making his cargo equal to the aver-

Time of sailing.

Favourite stations.

CHAP. XVI.

age of the year, and reached home by the 27th of the following month.

Remarkable casualties.

This fishery has always been subject to remarkable casualties, which have been still farther increased since the vessels took a wider range, and ventured into the higher and more frozen latitudes. Our correspondent at Aberdeen states that,—

In 1819, out of 63 ships there were lost 10
... 1821, ... 79 11
... 1822, ... 60 7

Wrecks.

These wrecks have generally occurred in attempting to pass from the eastern coast to Lancaster Sound, across that great barrier of ice which fills the centre of Baffin's Bay. The sides of the vessels have sometimes been crushed together; at other times they have been pressed out of the water and laid upon the ice. But experience seems to have enabled the mariners to guard in some degree against these dangers. In 1829, of eighty-eight ships only four were lost; namely, the Dauntless, Bramham, of Hull; the Rookwood, Lawson, of London; the Jane, Bruce, of Aberdeen; the Home Castle, Stodart, of Leith.

Recovery of the Active.

Several of these shipwrecks have been attended with very peculiar circumstances. In 1825, the Active, Captain Gray, of Peterhead, was so completely beset in Exeter Sound, that on the first October the crew were obliged to abandon her and take a passage in other ships. Next year a vessel, sent out to ascertain her fate, found her on the beach, at a little distance from the place of besetment, completely uninjured. She was got off in a few days, and brought home with her cargo to Peterhead, where she arrived on the 12th September.

The Dundee.

In 1826, the Dundee, Captain Dawson, of London, having ventured into the higher parallels of Baffin's Bay, was in latitude 74° 30′ so completely enclosed, that the crew could obtain no assistance from the other ships.

To add to their distress, a Dutch vessel near them was completely wrecked; and the men, to the number of forty-six, came on board entirely destitute. They were supported from the 23d August to the 6th October, when they set out in their boats to endeavour to reach the Danish settlement of Levely; but, as this was 350 miles distant, much doubt was entertained whether they would ever arrive at their destination. The crew of the Dundee, reduced to extreme distress by the want of provisions, succeeded in killing some seals and bears, on whose coarse flesh they were thankful to sustain life. On the 1st February they caught a whale, and on the 16th a second, which afforded great relief, especially as other fishes were attracted by the desire to feed on the carcass of this huge animal. Unfortunately for their repose, the sea was not so completely frozen but that enormous icebergs were still tossing through it with thundering noise, tearing up the fields by which the ship was surrounded. On the 22d February, one of uncommon magnitude was seen bearing directly upon their stern, its collision with which appeared inevitable; whereupon the seamen, snatching their clothes, leaped out upon the ice, and ran to some distance. The iceberg rolled on with a tremendous crash, breaking the field into fragments, and hiding from their view the ship, which they expected never to see again; but happily it passed by, and the Dundee appeared from behind it uninjured,—a spectacle that was hailed with three enthusiastic cheers. The mariners lost sight of the sun for seventy-five days, during which they suffered such severe cold that they could not walk the deck for five minutes without being frost-bitten. Luckily they were able to pick up a quantity of spars and staves belonging to the Dutch wreck, which afforded a supply of fuel, otherwise they must have perished from the intensity of the frost. By great good fortune, too, the body of ice in which they were enclosed drifted to the southward more than eleven degrees (from 74° 30′, down to 63°), or about 800 miles, and was thus brought nearly to the

Dutch ship-wreck.

Great privations.

Extreme cold.

CHAP. XVI.

Fortunate escapes.

mouth of Davis' Strait. On the 1st April, when the Lee, Captain Lee of Hull, had just commenced her fishing, the crew were agreeably surprised by meeting the Dundee, whose catastrophe had excited the greatest interest at home; they supplied her liberally with provisions, and every necessary for enabling her to reach Britain. She accordingly got free of the ice on the 16th April, and on the 2d June arrived on the coast of Shetland, whence intelligence was immediately spread of her happy escape.

Finally, the whale-fishery deserves to be considered in its commercial relations, under which aspect it possesses considerable importance, whether we consider the large capital invested, or the amount and value of the proceeds.

Commercial relations.

The principal employment of funds in this trade consists in the construction and fitting out of the vessels adapted for its various purposes. This expense greatly exceeds that required for other ships of the same dimensions, owing to the manner in which the timbers must be doubled and fortified, the necessity of having seven boats, a copious supply of line, numerous casks, and fishing implements. Mr Scoresby states, that the Resolution, of 291 tons, was built in 1803 with all these equipments, but without the outfit for a voyage, at

Great outlay.

£6321. In 1813 the Esk of Whitby, of 354 tons, cost £14,000; but this included the outlay for her first adventure, which, being supposed to amount to £1700, would make the original expense only £12,300. The sum of £14,000 is stated to us from Hull as the estimate for building and furnishing at that port a ship of 350 tons in the year 1812. Since that period a great reduction has taken place. Mr Cooper, in 1824, reported to the House of Commons that the sum required was only £10,000; and according to the information received in July 1830 from the different ports, we found that such a ship could then be built and completely equipped for about £8000. A Dundee correspondent calculates that half of this amount is expended in carpenter-work, and

the remainder in sails, rigging, casks, lines, and other apparatus. CHAP. XVI.

Annual expenditure.

Besides this original cost, a large annual expenditure is incurred in the prosecution of the fishery. There is first the outfit, being the provisions and other supplies put on board before the ship goes to sea. Mr Scoresby estimates the expense of fitting out the Resolution, in 1803, at £1470,—namely, provisions, coals, and similar necessaries, £769; insurance, £413; advance-money to seamen, £288. The statements forwarded, at the date mentioned above, from the several ports, vary in a remarkable degree. At Leith the amount is from £700 to £1200; at Aberdeen, £1400; at Peterhead, from £1200 to £1500; while at Hull it is reckoned at £2000, exclusive of seamen's wages. Probably there may be some difference as to the articles comprehended in these calculations. An English crew, besides, may expect to be more amply provisioned, while the voyage from Hull is undoubtedly somewhat longer. To this first outlay must be added the contingencies occurring in the different stages of the fishery, as well as in preparing the cargo for sale. The pay of the master and harpooneers depends almost entirely upon their success, as they receive a certain sum for every whale struck, and afterwards for every tun of oil extracted: the seamen also, though they must have their monthly wages, obtain additional allowances in the event of a prosperous voyage. At Peterhead, it is estimated that, if a ship comes home *clean*, the entire loss will exceed £2000; while at Hull the total expense of a voyage, producing 200 tuns of oil, is considered to be £3500 exclusive of insurance.

Mode of payment.

Produce of the fishery.

The produce of the fishery consists of oil and whalebone; none of the other articles, in an estimate of this kind, being worthy of much consideration. The prices of these two commodities vary greatly, both at different periods and from one year to another.

Whale-oil, in 1742, is stated to have sold for £18 per tun; but in the following year it fell to £14. In 1801

CHAP. XVI.

Variations in the value of oil.

it rose so high as £50; but in 1802 was only £31; and in 1807 had sunk so low as £21. In 1813 it reached a higher price than ever, the finest quality being sold at £60; but the prosperous fishery of 1814 brought it down again to £32. Mr Scoresby reckons the average of the nineteen years ending with 1818, at £34, 15s.; while an intelligent correspondent at Aberdeen stated that of the twenty preceding at £28, 15s. The price in July 1830 was given in the Scotch ports at from £24 to £26; in Hull at £24. Since that time it has run nearly between £25 and £30; which last rate for the last two or three years has been fully supported.

Value of whalebone.

Whalebone bore anciently a very high price, when the rigid stays and expanded hoops of our grandmothers produced an extensive demand for this commodity. The Dutch have occasionally obtained £700 per ton, and were accustomed to draw £100,000 annually from England for that one article. Even in 1763 it brought £500; but it soon fell, and has never again risen to the same value. During the present century the price has varied between £60 and £300, seldom falling to the lowest rate, and rarely exceeding £150. Mr Scoresby reckons the price in the five years ending 1818 at £90; while in July 1830, it was stated from the different ports to be from £160 to £180. The average price of the twenty years to 1834 was estimated at £163. The rate in 1844 is reported to us at £300. This is for what is called the *size*-bone, or such pieces as measure six feet or upwards in length; those below this standard are usually sold at half-price. It may appear singular that whalebone should rise while oil has been so decidedly lowered; but the one change, it is obvious, has really caused the other. Oil being the main product of the fishery regulates its extent, which being diminished by the low price, the quantity of bone is lessened, while the demand for it continuing as great as before, the marketable value consequently rises.

Increase in price.

The whale-fishery, for one ship and one season, is a complete lottery, the result of which, according to the

skill and good fortune of the persons employed, fluctuates between a large profit and a severe loss. Sometimes a vessel is so unlucky as to return *clean;* another brings only one fish; while no fewer than eight or nine of these, producing about ninety tuns of oil, are necessary to make an average voyage. But there are many instances of a much larger produce. The greatest cargo ever known by Mr Scoresby to have been brought from the northern seas was that of Captain Souter, of the Resolution of Peterhead, in 1814. It consisted of forty-four whales, yielding 299 tuns of oil, which, even at the reduced rate of £32, sold for £9568, raised by the whalebone and bounty to about £11,000. In 1813, both the elder and younger Mr Scoresby secured cargoes, less in quantity indeed, but which, from the oil selling at £60 per tun, yielded a still larger return. The former, in the course of twenty-eight voyages, killed 498 whales, whence were extracted 4246 tuns of oil, the value of which and of the bone exceeded £150,000.

Fluctuations of the trade.

Greatest returns

The Dutch have published tables, exhibiting the results of their fishery for the space of 107 years, between 1669 and 1778,* both inclusive. During that period they sent to Greenland 14,167 ships, of which 561, or about four in the hundred, were lost. They took 57,590 whales, yielding 3,105,596 quardeelen† of oil, and 93,179,860 pounds of bone, which sold for £18,631,292.‡ The expense of fitting out the ships amounted to £11,879,619; the value of those lost was £470,422; and the expense of preparing the oil and bone was £2,567,109,—total expenses, £14,917,150; leaving a profit of £3,714,142. The Davis' Strait fishery, between 1719 and 1778, employed 3161 vessels, of

Dutch tables

* The years 1672, 1673, and 1674, are not included, the war with France having caused a suspension of the fishery.

† A quardeel of oil contains from 18 to 21 stekans, or from 77 to 90 imperial standard gallons; and 100 Dutch pounds are equal to 109lbs. avoirdupois nearly.

‡ In converting the Dutch estimates into English money, the florin is valued at 20½d. sterling.

CHAP. XVI.

Greenland and Davis' Strait fisheries.

which 62 were lost. The produce was £4,288,235, which, deducting £3,410,987 of expenses, left a profit of £877,248. The Greenland fishery would thus have yielded a profit of about 25 per cent., and the Davis' Strait of about 26 per cent.; but it may be observed that the Dutch, in their estimate of expenses, have not included the original cost of the vessels. From 1785 down to 1794, the number of ships was reduced to sixty, and the trade is said to have been carried on with absolute loss.

British fishery.

The British fishery for some time yielded a produce much exceeding in value that of the Dutch even during the period of its greatest prosperity. In the five years ending with 1818, there were imported into England and Scotland 68,940 tuns of oil, and 3420 tons of whalebone; which, valuing the oil at £36, 10s., and the bone at £90, with £10,000 in skins, raised the whole to £2,834,110 sterling, or £566,822 per annum. The fishery of 1814, a year peculiarly fortunate, produced 1437 whales from Greenland, yielding 12,132 tuns of oil, which, added to the produce from Davis' Strait, formed altogether, even at comparatively low prices, a value of above £700,000.* It may be mentioned that this trade is now carried on without legislative encouragement, no bounty having been granted since the year 1824.

Change of the ports.

There has also been a somewhat singular change as to the ports in which the fishery is pursued. In London were undertaken all the discoveries which led to its establishment; and for some time a complete monopoly was enjoyed by the great companies formed in that city. Even between the years 1780 and 1790, the metropolis sent out four times the number of vessels that sailed from any other town. It was observed, however, that her efforts were on the whole less fortunate than those of the rivals who had sprung up; and her merchants

* In all these statements the measure employed is the tun of 252 old wine gallons, equal to $209\frac{6}{10}$ Imperial standard gallons.

were so much discouraged that, in Mr Scoresby's time, they equipped only seventeen or eighteen vessels. They have since entirely abandoned the trade, employing in 1827 no more than two ships, in 1835 only one; at present none. Hull early became a competitor with the capital, having sent out vessels from the very commencement. Although checked at first by the influence of the privileged bodies, as soon as the trade became free she prosecuted it with distinguished success. In the end of the last century that town attained, and for forty years preserved, the character of the first whale-fishing port in Britain. Since 1837 it declined so much as to send in 1842 only two vessels. The two following years, however, showed a great revival. Whitby engaged in this pursuit in 1753, and carried it on for some time with more than common fortune; but her operations have since been discontinued. Liverpool, after embarking in the undertaking with spirit, has now entirely relinquished it. Newcastle, though much declined, still carries on a moderate trade. Meantime the eastern ports of Scotland gradually extended their transactions, while those of the country at large were diminishing. The increase was most remarkable at Peterhead; and indeed this place, compared especially with London, must derive a great advantage from avoiding, both in the outward and homeward voyage, 600 miles of somewhat difficult navigation. It is now decidedly the chief port in the United Kingdom. Leith, Montrose, and Aberdeen, after starting with spirit, entirely withdrew, though the last again sent a vessel in 1844. Dundee, and on a smaller scale Kirkcaldy, have kept up a steady trade; while Bo'ness also despatches one vessel.

Enterprise of Hull.

Scottish ports.

The following summary has been collected from Mr Scoresby's work, as the average quantity of shipping fitted out in the different ports for nine years ending with 1818; since which time it will appear hereafter that the amount has considerably declined.

CHAP. XVI.

Average quantity of shipping.

		Average of 1810-18.
England,—	Berwick	1
	Grimsby	1
	Hull	53
	Liverpool	1
	London	17
	Lynn	1
	Newcastle	4
	Whitby	8
		91
Scotland,—	Aberdeen	10
	Banff	
	Dundee	7
	Greenock	
	Kirkcaldy	
	Kirkwall	
	Leith	8
	Montrose	2
	Peterhead	6
		40
	Total	131

Disasters of 1830.

The year 1830 was the most disastrous that ever occurred in the annals of British fishery. Melancholy as the details are, they possess a deep interest, and may afford useful lessons to future navigators; we have therefore taken some pains to procure such materials as might enable us to exhibit, in a full and connected view, the occurrences of this calamitous season. We consider ourselves particularly fortunate in having obtained journals, written by individuals who were present at the different scenes of shipwreck; and these not only give a minute detail of the events, but forcibly represent the emotions which the view of them excited. A variety of interesting documents have also been received, from intelligent friends at the respective fishing-ports, in reply to queries transmitted to them on the subject.

Causes.

In tracing the causes of these dreadful disasters, it will be necessary to explain the manner in which masses of ice are formed, and the positions they occupy

in that extensive inlet, to the successive parts of which we give the names of Davis' Strait and Baffin's Bay. This sea, though not constituting, as was once supposed, a completely enclosed gulf, has yet no opening so wide as materially to interrupt the continuity of its shores on either side. Ice of a certain description may cover the greatest expanse of water; but every one knows that it is formed most extensively, and of the most compact texture, in bays and along a precipitous beach. The winding and generally elevated coast of this strait has always produced it in the greatest varieties, among which those of bergs and floes have been most conspicuous. The land-ice, during the rigour of winter, remains fixed in an unbroken sheet, stretching many miles out to sea. Under the warmth of spring and early summer, numerous fragments are detached, which, through the action of tides and currents, are floated out into the ocean, and sometimes reach even low latitudes on the shores of America. The greater proportion, however, coming from the opposite coasts, meet in mid-channel, and unite into a compact and continuous barrier, through which, till a very advanced period of the season it is impossible for the navigator to penetrate. Between this central body, called the middle-ice, and that attached to the land, there intervenes a narrow and precarious passage, always more or less encumbered, and often entirely closed up; yet through which the adventurous mariner can generally, in the course of two or three months, wind his course into the higher latitudes in the direction of Lancaster Sound.

Formation of masses of ice.

Land-ice.

Prior to the voyages of Ross and Parry, the range of operations had been limited to the south-west fishery, and to that on the eastern shore as far as Horn Sound. These fields, however, gradually shared the fate of those in the Greenland Sea,—being, as it were, *fished out;* the whales having learnt to take refuge from the destroying power of their assailants in some more distant recesses of the Arctic Ocean. When it was reported, therefore, by the officers employed in discovery, that, on the

Voyages of Ross and Parry.

CHAP. XVI.

Revived spirit of enterprise.

north-western shores of Baffin's Bay, fish had been seen in vast numbers, the spirit of enterprise was kindled, and success soon crowned its efforts. Since that period, not only the Greenland Seas have been nearly deserted, but the original fishing-grounds in Labrador and Davis' Strait have been regarded only as secondary objects; while every nerve has been strained to reach those interior shores, where whales are still found in an abundance elsewhere unexampled.

Course of approach.

To arrive at this more important station, the captains may proceed along either of the coasts of that great inland sea. The *western* might appear at first sight the more eligible one, leading most directly to the object, and avoiding that middle barrier which is so peculiarly dangerous. This shore, however, is exposed to the great body of ice, which, at the beginning of the season, floats down from the north, rendering the navigation at once tedious and dangerous. Hence the usual practice among whalers is to work their way up the eastern passage till they turn Cape York; beyond which the sea becomes much narrower, the central ice usually terminates, and an opening is found stretching to the western side. Before reaching Cape York, however, and after passing that formidable promontory called the Devil's Thumb, they must cross the spacious expanse of Melville Bay, bounded on the north by a bold shore, covered with perpetual ice and snow. Here those dangers occur which have proved fatal to so many navigators. A strong wind from the south-west loosens the ice, and drives its severed fragments directly into the bay just specified. Arrested by its northern boundary, these are crowded together, and tossed with a violent commotion, which involves the mariner in the most deadly peril. This place, accordingly, was almost exclusively the scene of the calamitous shipwrecks in 1830, which are now to be described.

Point of danger.

Most of the vessels destined for the fishery that year sailed between the middle and end of March; but, having a tedious voyage out, they did not reach the en-

trance of Davis' Strait till the close of April. This delay, chiefly occasioned by the prevalence of adverse winds attended with rain, also prevented many of them from crossing over to Labrador, and attempting the south-west fishery. They proceeded, therefore, directly "up the country," as they term it; that is, northward along the eastern coast of the strait; and the sea being remarkably open, and very few whales in sight, they made an uncommonly rapid run. When beyond Disco Island, indeed, they were detained a whole week by the ice; yet, even there, an unusual extent of open water was observed to the westward; seemingly in consequence of the south-westerly gales, which had in a great measure broken up the field in mid-channel, and driven its loosened fragments into a more northerly quarter. We have been informed, that several vessels made an attempt to cross the strait in this latitude, though without success. Working slowly upwards, they at last reached the opening of Melville Bay, where, on the 10th of June, about a month before the usual period, more than fifty sail were assembled. This recess, however, presented a most alarming aspect; being crowded with floes of ice that had been driven in by the winds, and arrested by the rugged margin of the northern shore. If, however, they could by any means reach the western boundary of the ice, they might hope to find an open sea leading directly to the great fishing-ground. With eager impatience, therefore, they looked around for some canals by which they might proceed through it; but they saw only a few lanes, forming narrow and dangerous defiles. It is a maxim, however, that the ship which first reaches the open water is sure of a good fishing; hence an eager emulation is excited, and, as our Peterhead correspondent observes, "when one begins to trip through, all the rest follow." The St Andrew of Aberdeen, accordingly, entered one of these openings which appeared the most promising: twenty-two others imitated her example, and the remaining vessels were eagerly pressing onward, when,

Effects of a tedious voyage.

Alarming accumulation of ice.

CHAP. XVI.

Getting through the ice.

fortunately for them, two masses of ice closed together and shut them out, barring, at the same time, the return of those that had advanced. These last, separating into groups, took different directions, and made various degrees of progress; a few even came in sight of the open water; but all were finally arrested, and hemmed in by the ice.

Fated squadron.

One of the largest of these squadrons, and that whose eventful story we can relate in the greatest detail, consisted of six very fine vessels, the St Andrew of Aberdeen, the Baffin and the Rattler of Leith, the Eliza Swan of Montrose, the Achilles of Dundee, and the French ship Ville de Dieppe. They began by making themselves fast to some icebergs, but soon quitted these in order to attempt a passage to the western side. On the 19th a fresh gale sprung up from the S. S. W., and drove in upon them masses of ice, by which they were soon beset, in lat. 75° 10′ N., long. 60° 30′ W., about forty miles to the southward of Cape York. They ranged themselves under the shelter of a large floe, having water barely sufficient to float them. Here they formed

Perilous position.

a line one behind another, standing stem to stern so close as to afford a continued walk along their decks; being at the same time so pressed against the ice that in some places a boat-hook could with difficulty be inserted in the interval. In the evening of the 24th the sky darkened, the gale increased, the floes began to overlap each other, and closed upon the ships in an alarming manner. The sailors then attempted to saw out a sort of dock, where they hoped to be relieved from this severe pressure; but soon a huge floe was driven upon them with

The Eliza Swan.

a violence completely irresistible. The Eliza Swan (whose surgeon, Mr Maccall, has also furnished us with some particulars) received the first shock, and was saved only by the ice raising her up. It caused her indeed to strike with such force on the bow of the St Andrew that her mizzen-mast was nearly carried off, after which it passed from under her, after damaging severely her stem and keel. It next struck the St Andrew, midship,

breaking about twenty of her timbers, and staving a number of casks; but it then fortunately moved along her side, and went off by the stern. Now, however, pursuing its career, it reached successively the Baffin, the Achilles, the Ville de Dieppe, and the Rattler, and dashed against them with such tremendous fury that these four noble vessels, which had braved for years the tempests of the Polar deep, were in a quarter of an hour shattered into fragments. The scene was awful,—the grinding noise of the ice tearing open their sides; the masts breaking off and falling in every direction; were added to the cries of two hundred sailors leaping upon the frozen surface, with only such portions of their wardrobe as they could snatch in a single instant. The Rattler is said to have become the most complete wreck almost ever known. She was literally turned inside out, and her stem and stern carried to the distance of a gunshot from each other. The Achilles had her sides nearly pressed together, her stern thrust out, her decks and beams broken into innumerable pieces. The Ville de Dieppe, a very beautiful vessel, though partly filled with water, stood upright fourteen days, and the greater part of her provisions and stores were saved; as were also some belonging to the Baffin, two of whose boats were squeezed to pieces. All the other boats were dragged out upon the ice, and were occupied by the sailors as their only home. Not far from the same spot the Progress of Hull was crushed to atoms by an iceberg on the 2d of July; and on the 18th of the same month, the Oxenhope, also of that port, became a total wreck.

Complete wreck of four ships.

Complete wreck of the Rattler.

The Resolution of Peterhead, Laurel of Hull, Letitia and Princess of Wales of Aberdeen, had advanced considerably farther to the north-west, being in lat. 75° 20′ N., long. 62° 30′ W. They were lying side by side, and, having cut out a dock in the ice, considered themselves perfectly secure. But the gale of the 25th drove the floes upon them with such fury that the sides of the two first were pierced; and being filled with water to the deck, were pressed so forcibly against the Laurel

Succeeding wrecks.

CHAP. XVI.

The Hope of Peterhead.

which lay between them, as almost to raise that vessel out of the water. This last, however, remained for the present in safety, and the seamen busied themselves in carrying on board of her the provisions and stores of her two wrecked companions. But, on the 2d of July, she, along with the Hope of Peterhead, was exposed to a gale if possible still more terrible than the former, when they both shared the fate of the Resolution and Letitia. The Hope, which was standing in the water clear and secure, was overwhelmed with such rapidity that in ten minutes only the point of her maintop-gallant-mast was seen above the ice.

The Spencer and Lee.

The tempest, on the 26th June, assailed also the Spencer and the Lee, which had penetrated farther north than any of the other vessels, having reached the latitude of 76°. The latter escaped with only a number of her timbers shattered; but the former, after a long and vigorous resistance, had her hold burst open and filled with water, so that she soon became a complete wreck. Sufficient warning, however, had been given to enable the sailors to lodge on the ice their most valuable effects. In this vicinity the William and Ann of Whitby and the Dordon of Hull were attacked at the same moment. The latter, fortunately, was raised up by the pressure of the ice into a safe position; but the other being exposed to the action of two opposite floes, was crushed to pieces so rapidly that nothing could be saved out of her; and a boat, into which the captain had thrown a few articles from the cabin-windows, was itself soon afterwards sunk. In the same latitude, a few miles to the westward, the tempest also proved fatal to the Old Middleton of Aberdeen.

Escape of the Dordon of Hull.

Later disasters.

A similar disaster befell part of a large group, amounting to twenty-two sail, which had not entered the ice, but remained considerably to the southward, in about lat. 74° 20′ N. They seem scarcely to have felt the storm of the 25th June, and remained in tolerable safety, though beset, till the night of the 30th. A

heavy gale then sprung up, and increased continually till the morning of 2d July, when it swelled to a frightful tempest. The howling of the wind, the showers of hail and snow, the dark and fearful aspect of the sky, gave warning of approaching danger. At seven in the morning a signal of distress was hoisted by the William of Hull, and in a short time thereafter she appeared almost buried under masses of ice. About ten the North Briton was reduced to a complete wreck; and at eleven the Gilder was in a similar predicament. During six hours the storm slightly abated, but returning after that interval with augmented fury, pressed the ice with additional force upon the Alexander of Aberdeen and the Three Brothers of Dundee,—two fine vessels, so strongly built that an observer might have supposed them capable of withstanding any shock whatever. They made accordingly a very stout resistance; the conflict was dreadful, and was beheld with awful interest by the sailors as they stood round: at length their timbers gave way at every point,—the sides bursting open, the masts crashing and falling with an astounding noise; the hull of the Three Brothers was so much twisted that the two ends of the ship could scarcely be distinguished: finally, only some broken masts and booms appeared above the ice. The crews, spectators of this awful scene, gave three cheers in honour of the gallant resistance made by their vessels to the overpowering element by which they had been vanquished. Our correspondent here observes,—somewhat as Captain Parry had already done at a critical period,—that a ship, even the strongest which human art can construct, becomes like an egg-shell when opposed to the full force of this terrific agent.*

Frightful tempest.

Successive destruction of the ships.

Power of the ice.

It is a gratifying circumstance that, in the whole of

* The shipwreck of these vessels is well represented in a lithographic print, from a drawing by Mr Laing, surgeon to the Zephyr of Hull. To this gentleman, as well as to Mr Alexander, surgeon to the Three Brothers of Dundee, we have to acknowledge ourselves indebted for some useful information.

CHAP. XVI.

Escape of the crews.

these sudden and dreadful disasters, there should not have occurred the loss of a single life. The very element, indeed, which destroyed the vessels, was in so far propitious, as it afforded to the crews a secure though uncomfortable retreat. By leaping out upon the ice in the moment of wreck, they all effected their escape, though we have heard of several instances in which the danger was almost inevitable. Sometimes the seamen, before they could snatch their clothes and bedding, found themselves up to the middle in water. The surgeon of the North Briton beheld the ice rushing in and meeting from opposite quarters in the cabin, before he was able to make his retreat.

Colony of shipwrecked mariners.

The shipwrecked mariners, nearly a thousand in number, were now obliged to establish temporary abodes on the surface of that rough and frozen sea where their ships had been destroyed. They erected tents of sails detached from the broken masts; they kindled fires, and procured provisions, either out of their own shattered vessels, or from those of their companions which had happily escaped. But still their situation, though not desperate, was dreary in the extreme; producing the feeling that they were like outcasts in the most desolate region of the earth, without any assured means either of subsistence or return. Yet such is the elastic spirit of British tars, that, as soon as the first shock was over, they began with one consent to enjoy themselves, exulting in the idea of being their own masters. Finding access, unfortunately, to considerable stores of wine and spirits, they began a course of too liberal indulgence. The rugged surface of the Arctic deep was transformed into a gay scene of festivity. The clusters of tents with which it was covered, the various scenes of ludicrous frolic, the joyous shouting of our sailors, and the dances and songs of the French, suggested the idea of a festival; some even gave it the name of Baffin Fair. The Frenchmen declared that they had never been so happy in their whole lives. Excursions of considerable extent were made over the ice from one party to another; a communication was

Wild festivities.

even opened between the northern and southern detachments of the fleet, and so regularly carried on as to be called by the latter the "north mail." Baffin fair.

Burning down the ships.

A few days after the different shipwrecks, the seamen, in almost every instance, proceeded to a very extraordinary operation,—that of setting fire to the vessels, and burning them down to the water's edge. The object was, that, when the upper surface of the ship was thus removed, the casks and chests containing the clothes and provisions might float. A sailor, who witnessed this operation with the first four wrecks, describes it as having completely answered its purpose. Others deprecated the practice as causing a very wanton destruction of property, which might have been preserved for the use, at least, of other crews. The ships were for some time borne up on the surface by the ice on which they rested; but when it was melted, they sunk and disappeared, and the waves were then strewed with floating fragments of every shape and size,—blocks, chests, casks, ropes, shattered pieces of masts and yards, and timber of all dimensions.

Loss of life.

We have already noticed the pleasing circumstance that, in the first awful catastrophe of the vessels, there was not a single life lost; but we must add that a few died afterwards in consequence of fatigue and exposure to cold. Several also perished in excursions over the ice, particularly in one undertaken by the captains of the Laurel, Letitia, and Progress. Not finding sufficient room in the Bon Accord, where the shipwrecked crews had been received, they departed in search of some other vessel which might have more accommodation. The three masters carried merely their clothes, and after travelling a direct distance of twenty miles, much increased by the circuitous track they were obliged to follow, they reached the ships Dee and Mary Frances, into which they were kindly received. But the seamen imprudently encumbered themselves with a boat, which they had frequently to drag over the ice: they thus

CHAP. XVI

Causes of death.

spent a much longer period, and exposed themselves to such severe cold that five of them died; while others, reduced to a most distressing state, were recovered only by the extreme care with which they were treated. With regret we must subjoin, that some deaths appear to have arisen from the too free use of intoxicating liquors. A certain quantity, indeed, was rendered necessary by fatigue and cold; but that measure was greatly exceeded; and in passing over the icy surface, which was at once very rugged, and filled with various holes and crevices, several plunged in to rise no more. One man expired of mere intoxication. Yet it is satisfactory to add, amid these irregularities as well as the thoughtless gayety which every where prevailed, that, whenever the exertions of the sailors were required for the general service, the utmost activity was manifested, and complete subordination observed.

Dangers of the remaining ships.

After these disasters, the ships remained still closely beset, and their situation became the subject of a daily increasing anxiety. They had gone out wholly unprovided for wintering in the Arctic zone; while the extensive loss of provisions and fuel, with the numerous crews crowded on board the ships, rendered the prospect still more gloomy and doubtful. On the 21st July, in consequence of some favourable appearances, the St Andrew, Eliza Swan, and other ships on the northern station, determined to attempt penetrating to the westward. The men, though quitting the scene of gayety which they had formed for themselves, obeyed the summons with much alacrity. In a few minutes the tents were struck, the crews of the wrecked ships were distributed among the surviving ones, and all hands began towing forward the vessels. They separated in various directions; but some, being driven considerably to the northward, were so long detained, that they repeatedly lost all hope of ever effecting their extrication. The men caught and dragged a few whales through holes in the ice; but one harpooner relates, that these animals were so extremely vigilant that

he could effect nothing unless he approached them without his shoes, and thus prevented an alarm. September arrived, and the ice was forming so rapidly, that in two days a place where a boat could have sailed might be safely walked over. The St Andrew and several other vessels had been driven about thirty miles N. W. of Cape Dudley Digges, into lat. 76° 2′ N., long. 68° 46′ W. At last, after much laborious sawing and towing, they succeeded, on the 10th of September, in making their way into open water. Most of those which had taken a more southern direction reached the western coast towards the close of August, and in lat. 71° N.

Vigilance of the whales.

The feelings excited at home by the intelligence of these unparalleled misfortunes may be more easily conceived than described. The appearance, each successive year, at the great ports, of the first vessel returning from the fishery, is, in all cases, attended with deep interest and anxiety; and this season, in consequence of the long delay, these emotions had been wound up to an intense pitch. The tidings were brought to Peterhead, on the 8th October, by the James, Captain Hogg; and to Hull, on the 10th, by the Abram, Captain Jackson. Our correspondents describe, in the strongest terms, the universal gloom that overcast these towns; the eager throng which besieged the houses of the captains, and every place where information could be hoped for; as also the alarm of the females, making hasty inquiries after their brothers and husbands, to which only doubtful answers could be returned. It was a scene of public and general calamity. The news being conveyed to Aberdeen by the next day's mail, spread equal consternation in that city. A subscription was opened at Hull on behalf of the seamen, many of whom were exposed to great distress, in consequence of their pay having been stopped from the period at which the wreck of their vessels took place.

Effects of these losses at home.

General sense of calamity.

The following list contains the entire number of ships which were lost in this disastrous year:—

CHAP. XVI.

Ships lost.

		Tons.
Aberdeen, ...4.—	Alexander	252
	Letitia	318
	Old Middleton	329
	Princess of Wales	308
Hull, ...6.—	Gilder	360
	Laurel	321
	North Briton	262
	Oxenhope	286
	Progress	307
	William	350
Leith,.....2.—	Baffin	321
	Rattler	348
Dundee,.....2.—	Achilles	367
	Three Brothers	339
Peterhead,..2.—	Hope	251
	Resolution (Philip)	400
Whitby,.....1.—	William and Ann	362
Montrose,....1.—	Spencer	340
Greenock,....1.—	John	316
Dieppe,.. .....1.—	Ville de Dieppe	400

Amount of loss.

The amount of the loss occasioned by these shipwrecks is estimated as follows:—

Value of 19 British ships, including stores, &c., average £5000	£95,000
Value of outfit, provisions, and wages, £2000	38,000
Twelve damaged; repairs of each cost on an average £800	9,600
	£142,600

Loss of produce.

A still severer loss was sustained in the great failure of the produce, very imperfectly compensated by a rise of the oil and whalebone to more than double the former price.

The following table, derived from sources which may be fully relied upon, exhibits a complete summary of the results of the whale-fishery during the twenty years from 1815 to 1834 inclusive:—

CHAP. XVI.

Summary of the results of the whale fishery from 1815 to 1834.

Year.	Number of Ships sent to Greenland and Davis' Strait. G.	D. S.	Total Ships.	Total Tonnage.	Total Ships Lost.	Total Tuns of Oil.	Total Tuns of Bone.	Number of Whales.	Tuns of Oil for each Ship sent out.	Tuns of Oil in each Whale.	Extreme Prices of Oil in Glasgow per Tun.	Extreme Prices of Bone in London per Ton.
1815	98	48	146	47,148	1	10,682	528	733	73	14½	£33 to £50	£65 to £120
1816	101	45	146	46,868	1	13,590	632	1,330	93	10	27 35	60 85
1817	97	53	150	48,084	5	10,871	539	828	72¼	13¼	30 56	60 90
1818	94	63	157	50,362	2	14,482	666	1,208	92¼	12	35 58	65 80
1819	96	63	159	51,082	12	11,401	517	988	71¼	11½	34 40	70 80
1820	102	57	159	50,546	3	18,745	946	1,595	118	11¾	23 35	65 72
1821	80	79	159	50,709	14	16,853	923	1,405	106	12	20 25	70 88
1822	61	60	121	38,144	8	8,663	422	630	71½	13¾	20 29	210 235
1823	55	62	117	36,759	3	15,074	921	2,018	146	8¼	17 26	130 160
1824	32	79	111	35,013	1	9,871	534	761	89	13	17 28	190 200
1825	21	89	110	34,751	5	6,370	350	500	58	12¾	24 36	250 310
1826	5	90	95	30,414	5	7,200	400	512	75¾	14	24 35	255 315
1827	16	72	88	28,272	1	13,186	733	1,162	149¼	11½	18 24	170 220
1828	10	79	89	28,665	3	13,966	802	1,197	157	11¾	18 23	205 220
1829	1	88	89	28,812	4	10,672	608	871	120	12¼	22 25	200 210
1830	—	91	91	29,460	19	2,205	119	161	24¼	13½	30 55	360 400
1831	8	80	88	28,603	3	5,104	273	454	58	11¼	26 35	180 210
1832	19	62	81	26,393	5	12,610	676	1,563	155¾	8	18 22	100 170
1833	3	74	77	25,294	1	14,508	802	1,695	188⅓	8½	18 20	100 165
1834	7	69	76	24,955	3	8,214	442	872	108	9½	18 23	130 150
Yearly Average.			115¼	37,017	5	11,313¼	591¾	1,024¼	101¼	11¾	—	—

CHAP. XVI.

Statement of results.

The following statement of the results for 1834 shows the ports from which the fishery was carried on :—

Ships.	Tonnage.	Fish.	Oil.	Bone.	
			Tuns.	Tons.	Cwts.
27, Hull	8906	273	2696	146	10
2, Whitby	723	16	149	8	—
3, Newcastle	1131	25	283	17	4
1, Berwick	310	34	220	11	3
3, London	953	22	173	9	2
3, Montrose	962	20	144	7	7
11, Peterhead	3076	99	1093	57	5
6, Aberdeen	1979	72	801	45	9
8, Dundee	2789	115	1036	53	10
5, Kirkcaldy	1591	92	743	38	6
2, Burntisland	688	25	177	9	10
5, Leith	1847	79	699	37	4
76	24,955	872	8214	441	10

Fishery of 1835.

The fishery of 1835 was very disastrous, no less than six vessels being lost, though the crews were fortunately saved. Since that time the trade, which had already experienced a diminution, rapidly declined, till in 1842 only eighteen ships were sent out. In 1843 and 1844, however, it rallied considerably. There has been a certain return to the Greenland seas, which from 1833 to 1836 had been nearly deserted. Another novel feature is the fitting out of vessels entirely for the Greenland seal-fishery, where the vast number of those animals compensates for the small quantity of oil in each. Some endeavour to combine both objects.

Greenland seal fishery.

The following general view of results from 1835 to 1842 inclusive, is derived from the truly valuable Commercial Dictionary of Mr M'Culloch :—

Years.	Ships.				Whales caught.	Imperial Tuns of Oil.	Price.	Tons of Whalebone.
	Greenland.	Davis' Strait.	Total.	Lost.				
1835	1	70	71	6	167	2623	£28	—
1836	3	58	61	2	70	707	32	—
1837	15	37	52	2	122	1356	35	65
1838	31	8	39	1	466	4345	25	236
1839	29	12	41	–	115	1441	25	79
1840	11	20	31	2	22	412	25	14
1841	11	8	19	–	52	647	31	22
1842	14	4	18	–	54	668	30	—

The following details for 1843 have been communicated to us by an intelligent correspondent :—

Details for 1843.

Ports.	Ships.						Whales caught.	Seals.	Tuns of Oil.	Whalebone.	
	Davis' Strait.	Greenland. Whale.	Greenland. Seal.	Total.	Tonnage.	Lost.				Tons.	Cwts.
Hull	2	1	2	5	1353	–	26½	3,625	300½	14	17
Newcastle	2	–	–	2	791	–	11	—	132	7	–
Dundee	5	–	–	5	1622	–	41	—	359	22	6
Kirkcaldy	2	–	–	2	746	–	19½	—	154	9	16
Bo'ness	1	–	–	1	322	–	7	—	58	4	3
Peterhead	3	3	3	9	2040	1	41	23,200	648	22	2
	15	4	5	24	6874	1	146	26,825	1651½	80	4

Unfortunately Mr Coltish of Hull, who was accustomed to collect an annual statement of the produce, died in 1844; and no one has undertaken in his stead the same good work. We have thus been able to procure only the shipping and tonnage for that year, which will show a considerable increase over the two preceding.

Details for 1844.

Ports.	Ships.			Total.	Tonnage.
	Davis' Strait.	Greenland. Whale.	Greenland. Seal.		
Hull	5	3	2	10	2645
Newcastle	2	–	–	2	791
Kirkcaldy	2	–	–	2	696
Bo'ness	1	–	–	1	322
Dundee	5	–	–	5	1622
Aberdeen	1	–	–	1	313
Peterhead	4	5	2	11	2917
	20	8	4	32	9306

INDEX.

Akkolee Gulf, 367.
America, Injustice to, 465.
American expedition in search of Sir John Franklin, sent out by Mr. Grinnell of New York, 411, 427, 465; proposed new expedition, 588.
Anderson and Stewart canoe expedition in search of Franklin, 551.
Austin, Captain, in Resolute (Franklin search), 408, 423.
Aurora Borealis, 240.

Barrington, Daines, 19, 308.
Barentz, William, Expeditions of, 121–138.
Baffin's Bay, 208.
Baffin, William, Polar expedition of, 150; voyage in search of North-West Passage, 204.
Barrow, Mr. (afterwards Sir John), 213.
Barrow's Strait, 225, 389.
Back, Captain, overland expedition, 306; voyage in the Terror, 344.
Back's, estuary to river, 362.
Bank's Land, 232.
Baring's Island, Discovery of, 475.
Bear, the Polar, 77; anecdotes of, 78.
Bennet, Stephen, 144.
Belcher, Sir Edward (squadron in search of Franklin), 429, 464, 501, 505.
Bellot, Lieutenant, 432; his death, 497.
Bellot Strait, 459, 569.
Booth, Sir Felix, 272.
Boothia, 280; expeditions to the seas around, 344 to 369.
Breadalbane transport, Loss of, 496.
Britannia, Cape, 363.
Burroughs, Stephen, 114.
Button, Sir Thomas, Expeditions of, 203.
Buchan, Captain, 331.
Beglot and Baffin, voyage in search of North-West Passage, 204.

Cabot, John, 104,
Cabot, Sebastian, 105, 161.
Chancelor, Richard, 108, 113,
Climate of Polar Regions, 17; of Europe, 49.
Clavering, Captain, 326.
Collinson, Captain, sets sail in search Franklin, 405, 468; voyage of the Enterprise, 516.
Cortereals, The, Voyages of, 156, 160.

Danish colony, Baffin's Bay, 434.
Danish expeditions, 208, 328.
Davis, John, Voyages of, 179, 190.
Dease and Simpson, 307, 360.
De Haven, Lieutenant, 411, 466.
Digges, Sir Dudley, 193, 218.
Digges, Cape Dudley, 197.
Disco Island, 276, 559.
Dogs, Esquimaux, 83, 182.

Egede Hans, the Danish missionary, 20.
Ellice River, 362, 365.
Erebus and Terror, The sailing of, in 1845, 375.
Esquimaux, 166, 170, 177, 181, 192, 206, 215, 234, 242, 256, 266, 283, 296, 327, 345, 382, 437, 469, 471, 472, 474, 511, 543, 567, 575.

Felix, Cape, 577.
Forsyth, Commander C., 410.
Fotherby, Captain, Polar voyages of, 151.
Foxes, Arctic, 83, 240.
Fox, Captain, 210.
Fox, Voyage of the, under Captain M'Clintock, 552.
Franklin, Sir John, his expedition in search of a north-west passage, 370; Sir John's opinion, 371; sailing of, 375.
Franklin searching expedition, plan, 376; expeditions of 1848–49, Plover and Herald, 378; Lieutenant Pullen's boat expedition, 377; Sir John Richardson's overland expedition, 381; Rae, 384, 407; Sir James Clarke Ross, 385; Truelove whaler, Mr. Parker, 398; Dr. Goodsir, 399; Whaler Advice, Mr. William Penney, 399; demand for new expeditions, 403; expeditions of 1850–51–52, 422; Collinson and M'Clure, 405; Sir John Ross, 409; Mr. William Penney, 409; the Prince Albert, 410; the Grinnell (American) expedition under De Haven, 410; traces of the Franklin expedition at Cape Riley, 420; Mr. Kennedy in Prince Albert, 429; Sir E. Belcher's squadron, 429; expeditions of 1853, 464; Captain M'Clure, 469; expeditions of 1854, 503; Rae, 511; relics found, 513; Captain Collinson's voyage, 516; relics found, 520; second Grinnell (American) expedition under Kane, 520; Anderson and Stewart, 551; relics found by Anderson and Stewart, 551; expedition of 1857–8–9, under Captain M'Clintock, 552; relics found, 577, 578; record found, 579, 582, 583.
Franklin, Lady, Rewards offered by, 397; expeditions sent out by, 429, 465, 552.
Franklin Strait, 585.
French expeditions, 329.
Frobisher, Martin, Voyages of, 165, 177.
Frazer, Cape John, 544.
Frederickshaab, 558.

Goodsir, Dr. R. A., 399.
Gomez, Voyage of, 161.
Greenland, 51; whale fisheries of, 52; 590; Norse colony of, 55; eastern and western colonies of, 57; modern settlements of, 61; Danish settlement, 275; Danish expedition to, 328; French expeditions to, 329.
Grinnell Land discovered, 466.
Grinnell, Mr., of New York, his first expedition under De Haven, 411; second expedition under Dr. Kane, 520, 521.

Hawkes, Cape Francis, 530.
Herschel, Cape, 579.
Herring, Periodical appearance of, 74.
Hecla, Mount, Discovery of, 193.
Herald and Plover, Sailing of, 377, 378, 379; second exploration, 380.
Hoppner, Voyage of Parry and, 267.
Hobson, Lieutenant (finds record of Franklin), 579, 583.
Holsteinborg, in Greenland, 275.
Hore, Mr., Expedition of, 162.
Hudson, Henry, 139; his employment by the Dutch, 141; Polar expedition, 145; north-west voyage of, 193, 201; mutiny against, 199; death of, 200.
Hudson's Straits, 195.
Hudson's Bay, 196; settlement, 210.

Ice, Formation of, 22; accumulation of, 32; varieties of, 39; blink, 40; colour of, 41; reduction, 44; ex-

tent of, 52; periodical changes of, 53.
Icebergs, Origin of, 37; growth of, 39; floating of, 41; dissolving of, 42; size of, 46.
Iceland, 56, 99, 193.
Inglefield, Commander, 465, 502.

James, Captain, 210.
Jameson's Land, 323.
Jan Mayen's Island, 153, 319.

Kane, Dr. (second), Grinnell expedition, 520.
Kellet, Captain Henry, 376, 378, 380, 494.
Kennedy, Mr. William, sent out by Lady Franklin, 429, 465.
Kennedy, Port, 572.
King, Dr. 554.
King William's Land, 575.
Knight, Captain John, Expedition of, 191.

Labrador, 166.
Labyrinth Bay, 361.
Lancaster Sound, 207, 219, 222, 388; Franklin searching squadron in, 416.
Leidy, Cape Joseph, 544.
Leopold, Port, 390.
Lyon, voyage of Parry and, 233.

Magnetic Pole, Discovery of the, 292.
Maritime enterprise, 103, 161, 212, 308.
Mary Minturn river, 530.
Marten's voyage to Spitzbergen, 21.
Melville Bay, 412.
Melville Island, 226.
Meta Incognita, 167, 176.
Meteors, 242.
M'Clure sets sail in search of Franklin, 405; voyage of the Investigator, 469.
M'Clintock, 424; voyage in the Fox, 552.
Middle ice in Baffin's Bay, 387, 412.
Middleton, Captain, Expedition of, 210.
Moore, Commander Thos. L., 376.
Munk, Jens, Danish expedition under, 2[illegible].
Musk ox, 8[illegible].

North-west Passage, 18; early voyages in search of, 155, 211; Ross and Parry, 214; Parry, 221; Parry and Lyon, 233; Parry and Hoppner, 267; Ross's second voyage, 271, 307; the Franklin expedition to, of 1845, 370; discovery of, 464; remarks on discovery of, 586.
North Cornwall discovered, 502.
North Georgian Islands, 225.
North Star store-ship, 386, 411.
North Somerset, 392.
North Kent Island discovered, 502.
North Pole, 18, 341.
Norway and Denmark, Piratical voyages from, 55, 98.
Norwegian expedition, 98.
Nova Zembla, 129; Russian expedition to, 142.

Ocean, Temperature of, 28; peculiar circumstances of, 30; freezing point of, 39; profusion of life in, 63.
Ohthere, Voyage of, 98.
Ommanney, Captain, in Assistance (Franklin search), 408, 423.
Osborne, Lieutenant Sherard, in Pioneer (Franklin search), 408, 424.

Parry, Sir William Edward, Polar voyage 47; Parry and Ross, 214; second voyage of, 221; and Lyon, 233; and Hoppner, 267; Polar voyage of 333.
Parry, Mount Edward, 545.
Pet and Jackman, voyage of, 119.
Penney, Mr. (search for Franklin), 399, 409, 423, 425.
Phipps, Captain (Lord Mulgrave), Polar expedition of, 309.
Plover, Sailing of, 376.
Poole, Jonas, Polar expeditions of, 147.
Polar Regions, Climate of, 17; animal and vegetable life in, 62, 82.
Polar phenomena, 240, 315, 320

instances of great endurance in, 401.
Ponds Bay, 388.
Port Leopold, 390.
Portuguese voyages, 156.
Prince Albert schooner, 410, 413, 417, 420, 429; sent out under Mr. Kennedy, 429.
Prince Regent's Inlet, 224.
Prince of Wales' Land, 576, 585.
Pullen, Lieutenant, boat expedition, 377.
Pytheas, Ancient voyage of, 96.

Quirini, Expedition of, 101.

Rae, Dr., coasting and overland expeditions, 366, 381, 384, 407, 465, 511, 519.
Reindeer, 82.
Rensselaer Harbour, 530.
Repulse Bay, 367.
Richardson, Sir John's, overland searching expedition, 381.
Ross, Captain (Sir John), Voyage of, 214; second voyage of, 271, 307; search for Franklin, 409.
Ross, Sir James Clarke, search for Franklin, 385.
Ross's Peninsula, 368.
Russian expeditions to Nova Zembla, 142.

Samoiedes, Account of the, 115, 124, 257.
Sabine, 327.
Scoresby, 20; Polar voyages of, 316, 332; opinion regarding Franklin, 403.
Shedden, Robert, his yacht voyage in search of Franklin, 377; his death, 380.
Sledges, 218.
Smith's Sound, 218, 523.
Snow, red, 91, 218.
Spitzbergen, 127, 144, 310, 427.

Thackery, Cape, 530.
Thlew-ee-choh, or Great Fish river, 306, 551.
Trollope, Commander, 465.

Ungava Bay, 190.
Uppernavik, 434.

Victoria Archipelago discovered, 502.
Victoria Channel, 426.
Victoria, Cape, 577.
Victoria Land, 519.
Voyages, Origin of Polar, 17; of discovery, 56; ancient, to the north, 95, 102.
Voyages in search of a North-east Passage, 103, 143.
Voyages, Early, towards the North Pole, 144, 154.
Voyages, Early, in search of North-west Passage, 155, 211.
Voyages, Modern, in search of North-west Passage, 212, 307.
Voyages, Modern Polar, 308, 343.
Voyages in search of the Franklin expedition, 376.

Walrus, 72, 252.
Waygat Island, 215.
Wellington Channel, 225, 305, 374, 419, 508.
Weymouth, Captain George, Voyage of, 188.
Whale, 67, 71.
Whale fishery, Account of northern, 590.
Willoughby, Sir Hugh, Expedition of, 108.
Wolstenholme, Sir John, 193.
Wolstenholme, Cape, 196.
Wolves, 83.
Wood, Captain John, 141.

Young, Captain Allen, 576, 585.

Zeno, Nicolo, his voyage to the north, 99.